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FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 2008

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

ON

OVERSIGHT ON THE MONETARY POLICY REPORT TO CONGRESS PURSUANT TO THE FULL EMPLOYMENT AND BALANCED GROWTH ACT OF 1978

JULY 15, 2008

Printed for the use of the Committee on Banking, Housing, and Urban Affairs

Available at: http://www.access.gpo.gov/congress/senate/senate05sh.html

U.S. GOVERNMENT PRINTING OFFICE

50–409 PDF WASHINGTON : 2009

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

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FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 2008

TUESDAY, JULY 15, 2008

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 10:09 a.m., in room SR–325, Russell Senate Office Building, Senator Christopher J. Dodd (Chairman of the Committee) presiding.

OPENING STATEMENT OF CHAIRMAN CHRISTOPHER J. DODD

Chairman DODD. Well, good morning. Let me welcome my colleagues and others to this very important hearing this morning. I want to thank the Chairman of the Federal Reserve.

Today we are meeting in the most unusual and extraordinary moments in many ways in the recent history of our country. Let me tell you how we are going to proceed this morning.

This is, of course, a scheduled hearing with the Chairman of the Federal Reserve on Humphrey-Hawkins and dealing with monetary policy, and over the next hour or so, we are going to focus on that and give the Chairman an opportunity to give us his statement this morning on that statutorily mandated requirement to appear before the Committee and share his thoughts on this issue. And then, as I understand it, we are due to have a vote around 11 o'clock, and my hope would be that we would recess for a few minutes for that vote, and when we come back, the Secretary of the Treasury, Hank Paulson, and Christopher Cox, the Chairman of the Securities and Exchange Commission, will be with us to engage in a discussion of the financial services issues that are before us.

I want to thank Senator Shelby and my colleagues here for waiving the normal requirements of having several days of notice before we actually have a hearing like this. But I think all of us recognize the significance of the issues that are going on in our country at this moment and the importance of having the Secretary of the Treasury and the Chairman of the SEC as well as the Chairman of the Federal Reserve to be with us this morning. So I am very grateful to you and to the Secretary of the Treasury and Chris Cox.

So the first hearing will be to receive the Semiannual Monetary Policy Report from the Federal Reserve as previously scheduled, and after the conclusion of that hearing, we will convene a second hearing on Recent Developments in U.S. Financial Markets and Regulatory Responses to Them. The second hearing was noticed yesterday with the consent of Senator Shelby—and, again, I am

grateful to him—due to the special and exigent circumstances in our Nation's financial markets.

I want to thank Chairman Bernanke for testifying at both hearings. I also thank Secretary Paulson and Chairman Cox for agreeing to appear on very short notice at the second hearing. In deference to them and the importance of the matters at hand, I will provide a brief opening statement. I will ask Senator Shelby to do likewise. And then I would ask my fellow Members here if they would reserve their question period to make their opening statements. All statements will be included in the record as if read so that we can get to the statement by the Chairman of the Federal Reserve and then get to the questions as quickly as we can.

In considering the state of our economy and, in particular, the turmoil in recent days, it is important to distinguish between fear and facts. In our markets today, far too many actions are being driven by fear and ignoring crucial facts. One such fact is that Fannie Mae and Freddie Mac have core strengths that are helping them weather the stormy seas of today's financial markets. They are adequately capitalized. They are able to access the debt markets. They have solid portfolios with relatively few risky subprime mortgages. They are well regulated, and they have played a vital role in maintaining the flow of affordable mortgage credit even during these volatile times.

Another fact is that the subprime lending fiasco was preventable. In this Committee, 18 months of exhaustive hearings have documented what I have called a "pattern of regulatory neglect." The previous leadership, along with other financial agency leaders appointed by this administration, in my view ignored the clear and present danger posed by predatory lending to homeowners, to financial institutions, and to the economy as a whole. The result of this neglect is that the American people are experiencing unprecedented hardships and uncertainties.

Foreclosure rates continue at record levels. Each and every day in America, more than 8,000 families enter foreclosure. For those lucky enough to keep their homes, the value of their homes has dropped by the greatest amount in some cases since the Great Depression. Millions more are paying record-high prices for gasoline, for health care, for education, and even for the food that they put on their tables. They are watching the value of their pension funds and 401(k)s plummet. And they want to know when will things start to turn around, when will America get back on track.

Chairman Bernanke, you are to be commended, in my view, for your efforts to bring greater stability to our financial system during an unprecedented period of volatility. You also deserve credit for your willingness to address some of the unsafe, unsound, and predatory practices that proliferated over the last several years in the subprime mortgage market, as well as in the credit card lending. And we look forward to hearing from you today about the outlook for the Nation's economy and what can be done to improve it.

Certainly, this Committee has worked diligently in that regard. On Friday evening, the Senate passed, with an overwhelming bipartisan majority, a bill that we believe will assist homeowners at risk of foreclosure, establish a new, permanent affordable housing fund, modernize the FHA, strengthen the regulation of the GSEs,

and help restore confidence to the mortgage markets as a whole. It is certainly my view that this legislation deserves to be enacted as soon as possible, and I hope that will occur.

In addition, we are all by now aware that the Treasury and the SEC as well as the Fed made important policy announcements this past weekend, which we intend to examine carefully in the hearing later this morning with you, Mr. Chairman, Secretary Paulson, and Chairman Cox.

I think I can speak for everyone, I hope, on this Committee in saying that we all share a common desire to promote the common good of our country, and I think we all certainly appreciate the spirit in which the Fed, the SEC, and the Treasury Department have acted. But we do them and the American people a disservice if we do not examine very carefully the proposals that are being put forward. That is particularly true of the Treasury proposals. It is in many respects unprecedented. Although limited in duration, these proposals would give the Treasury unlimited new authority to purchase GSE debt and equity, it would exempt those purchases from pay-as-you-go budget rules, and it would grant to the Federal Reserve considerable new powers in relation to the regulation of the GSEs. These new powers could have the effect of crippling the efforts of virtually every Member of this Committee to create a true world-class regulator for the GSEs.

These proposals raise serious questions—questions about the nature of the economic crisis facing our Nation, about the ability of these proposals to address this crisis effectively, and about the burden to the American taxpayer potentially being asked to carry. These questions deserve serious answers.

Above all, this is a time to act on the basis of fact and not fear, as I said at the outset of these remarks. For too many years, leaders have shirked their duty, in my view, to protect the American taxpayer and to promote the American economy. At this critical moment, we must not flinch from our duty to do the same.

With that, let me turn to Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Mr. Chairman, I ask that my whole statement be made part of the record.

Chairman DODD. Without objection, it will be.

Senator SHELBY. Chairman Bernanke, we again welcome you to the Banking Committee. We know this is a stressful time for our country, for our banking system, and perhaps for the Federal Reserve. We welcome you to deliver the Federal Reserve's Semiannual Monetary Policy Report, as you are required by law to do.

I will keep my remarks brief and wait for Secretary Paulson and also SEC Chairman Cox to join you. But we are all interested in your views on the economy, where the economy is going to go, more than the specter of inflation, but other issues, related issues, such as the GSE situation.

A lot of us—and you have raised this issue, your Chairman raised this issue over 5 years ago in this Committee. A lot of us realized that the GSEs were not properly regulated and were thinly capitalized. We have seen this come home now. They were fears that we hoped would not come, but they are here today.

I guess the situation is some said always that the GSEs, because of the implicit guarantee of the Government, with over $5 trillion of debt, exceeding that of France and the U.K. combined, that it was a ticking time bomb. Well, someone has started the fuse burning. I hope it is not too little or too late. But I believe this is an opportune time to rein in the GSEs.

Senator Dodd has talked about this a lot: We realize they are important to our housing, they are important to our economy, but they have to be capitalized well. They have got to be managed well, and they have got to be regulated. And I hope later in the morning we will get into that. I think that is one of the topics of the day after your monetary policy report.

Thank you, Senator Dodd.

Chairman DODD. With that, Mr. Chairman, we welcome your comments, and your statement in full will be included in the record.

STATEMENT OF BEN S. BERNANKE, CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Mr. BERNANKE. Chairman Dodd, Senator Shelby, and Members of the Committee, I am pleased to present the Federal Reserve's Monetary Policy Report to the Congress.

The U.S. economy and financial system has confronted some significant challenges thus far in 2008. The contraction in housing activity that began in 2006 and the associated deterioration in mortgage markets that became evident last year have led to sizable losses at financial institutions and a sharp tightening in overall credit conditions. The effects of the housing contraction and of the financial head winds on spending and economic activity have been compounded by rapid increases in the prices of energy and other commodities which have sapped household purchasing power even as they have boosted inflation.

Against this backdrop, economic activity has advanced at a sluggish pace during the first half of this year while inflation has remained elevated. Following a significant reduction in its policy rate over the second half of 2007, the Federal Open Market Committee eased policy considerably further through the spring to counter actual and expected weakness in economic growth and to mitigate downside risk to economic activity. In addition, the Federal Reserve expanded some of the special liquidity programs that were established last year and implemented additional facilities to support the functioning of financial markets and foster financial stability.

Although these policy actions have had positive effects, the economy continues to face numerous difficulties, including ongoing strains on financial markets, declining house prices, a softening labor market, and rising prices of oil, food, and some other commodities.

Let me now turn to a more detailed discussion of some of these key issues.

Developments in financial markets and their implications to the macroeconomic outlook have been a focus of monetary policymakers over the past year. In the second half of 2007, the deteriorating performance of subprime mortgages in the United States triggered turbulence in domestic and international financial markets as in-

vestors became markedly less willing to bear credit risks of any type.

In the first quarter of 2008, reports of further losses and writedowns by financial institutions intensified investor concerns and resulted in further sharp reductions in market liquidity. By March, many dealers and other institutions, even those that had relied heavily on short-term secured financing, were facing much more stringent borrowing conditions.

In mid-March, a major investment bank, the Bear Stearns Companies Incorporated, was pushed to the brink of failure after suddenly losing access to short-term financing markets. The Federal Reserve judged that a disorderly failure of Bear Stearns would pose a serious threat to overall financial stability and would most likely have significant adverse implications for the U.S. economy. After discussions with the Securities and Exchange Commission and in consultation with the Treasury, we invoked emergency authorities to provide special financing to facilitate the acquisition of Bear Stearns by JPMorgan Chase and Company.

In addition, the Federal Reserve used emergency authorities to establish two new facilities to provide backstop liquidity to primary dealers, with the goals of stabilizing financial conditions and increasing the availability of credit to the broader economy.

We have also taken additional steps to address liquidity pressures in the banking system, including a further easing of the terms for bank borrowing at the discount window and increases in the amount of credit made available to banks through the Term Auction Facility.

The FOMC also authorized expansion of its currency swap arrangements with the European Central Bank and the Swiss National Bank to facilitate increased dollar lending by those institutions to banks in their jurisdictions.

These steps to address liquidity pressures, coupled with monetary easing, seem to have been helpful in mitigating some market strains. During the second quarter, credit spreads generally narrowed, liquidity pressures ebbed, and a number of financial institutions raised new capital. However, as events in recent weeks have demonstrated, many financial markets and institutions remain under considerable stress, in part because the outlook for the economy and, thus, for credit quality remains uncertain.

In recent days, investors became particularly concerned about the financial condition of the Government-sponsored enterprises Fannie Mae and Freddie Mac. In view of this development, and given the importance of these firms to the mortgage market, the Treasury announced the legislative proposal to bolster their capital, access to liquidity, and regulatory oversight.

As a supplement to the Treasury's existing authority to lend to the GSEs, and as a bridge to the time when the Congress decides how to proceed on these matters, the Board of Governors authorized the Federal Reserve Bank of New York to lend to Fannie Mae and Freddie Mac should that become necessary. Any lending would be collateralized by U.S. Government and Federal agency securities. In general, healthy economic growth depends on well-functioning financial markets. Consequently, helping the financial mar-

kets to return to more normal functioning will continue to be a top priority of the Federal Reserve.

I turn now to current economic developments and prospects. The economy has continued to expand, but at a subdued pace. In the labor market, private payroll employment has declined this year, falling at an average pace of 94,000 jobs per month through June. Employment in the construction and manufacturing sectors has been particularly hard hit, although employment declines in a number of other sectors are evident as well. The unemployment rate has risen and now stands at 5.5 percent.

In the housing sector, activity continues to weaken. Although sales of existing homes have been unchanged this year, sales of new homes have continued to fall, and inventories of unsold new homes remain high. In response, home builders continue to scale back the pace of housing starts. Home prices are falling, particularly in regions that experienced the largest price increases earlier this decade. The declines in home prices have contributed to the rising tide of foreclosures. By adding to the stock of vacant homes for sale, these foreclosures have in turn intensified the downward pressure on home prices in some areas.

Personal consumption expenditures have advanced at a modest pace so far this year, generally holding up somewhat better than might have been expected given the array of forces weighing on household finances and attitudes. In particular, with the labor market softening and consumer price inflation elevated, real earnings have been stagnant so far this year. Declining values and equities in house have taken their toll on household balance sheets, credit conditions have tightened, and indicators of consumer sentiment have fallen sharply. More positively, the fiscal stimulus package is providing some timely support to household incomes. Overall, consumption spending seems likely to be restrained over coming quarters.

In the business sector, real outlays for equipment and software were about flat in the first quarter of the year, and construction of nonresidential structures slowed appreciably. In the second quarter, the available data suggests that business fixed investment appears to have expanded moderately. Nevertheless, surveys of capital spending plans indicate that firms remain concerned about the economic and financial environment, including sharply rising costs of inputs and indications of tightening credit, and they are likely to be cautious with spending in the second half of the year. However, strong export growth continues to be a significant boon to many U.S. companies.

In conjunction with the June FOMC meeting, Board members and reserve bank presidents prepared economic projections covering the years 2008 through 2010. On balance, most FOMC participants expected that, over the remainder of this year, output would expand at a pace appreciably below its trend rate, primarily because of continued weakness in housing markets, elevated energy prices, and tight credit conditions. Growth is projected to pick up gradually over the next 2 years as residential construction bottoms out and begins a slow recovery and as credit conditions gradually improve. However, FOMC participants indicated that considerable uncertainty surrounded their outlook for economic

growth, and they viewed the risks to their forecast as skewed to the downside.

Inflation has remained high, running at nearly a 3.5-percent annual rate over the first 5 months of this year, as measured by the price index of personal consumption expenditures. And with gasoline and other consumer energy prices rising in recent weeks, inflation seems likely to move temporarily higher in the near term. The elevated level of overall consumer inflation largely reflects a continued sharp run-up in the prices of many commodities, especially oil, but also certain crops and metals. The spot price of West Texas intermediate crude oil soared about 60 percent in 2007 and thus far this year has climbed an additional 50 percent or so.

The price of oil currently stands at about 5 times its level toward the beginning of this decade. Our best judgment is that this surge in prices has been driven predominantly by strong growth in underlying demand and tight supply conditions in global oil markets.

Over the past several years, the world economy has expanded at its fastest pace in decades, leading to substantial increases in demand for oil. Moreover, growth has been concentrated in developed and emerging market economies, where energy consumption has been further stimulated by rapid industrialization and by government subsidies that hold down the price of energy faced by ultimate users.

On the supply side, despite sharp increases in prices, the production of oil has risen only slightly in the past few years. Much of the subdued supply response reflects inadequate investment and production shortfalls in politically volatile regions where large portions of the world's oil reserves are located. Additionally, many governments have been tightening their control over oil resources, impeding foreign investment and hindering efforts to boost capacity and production. Finally, sustainable rates of production in some of the more secure and accessible oil fields, such as those in the North Sea, have been declining.

In view of these factors, estimates of long-term oil supplies have been marked down in recent months. Long-dated oil future prices have risen along with spot prices, suggesting that market participants also see oil supply conditions remaining tight for years to come.

The decline in the foreign exchange value of the dollar has also contributed somewhat to the increase in oil prices. The precise size of this effect is difficult to ascertain as the causal relationships between oil prices and the dollar are complex and run in both directions. However, the price of oil has risen significantly in terms of all major currencies, suggesting that factors other than the dollar—notably, shifts in the underlying global demand for and supply of oil—have been the principal drivers of these increases in prices.

Another concern that has been raised is that financial speculation has added markedly to upward pressure on oil prices. Certainly, investor interest in oil and other commodities has increased substantially of late. However, if financial speculation is pushing oil prices above the levels consistent with the fundamentals of supply and demand, we would expect inventories of crude oil and petroleum products to increase as supply rose and demand fell. But,

in fact, available data on oil inventories show notable declines over the past year.

This is not to say that useful steps could not be taken to improve the transparency and functioning of futures markets, only that such steps are unlikely to substantially affect the prices of oil or other commodities in the longer term.

Although the inflationary effect of rising oil and agricultural commodity prices is evident in the retail prices of energy and food, the extent to which the high prices of oil and other raw materials have passed through to the prices of non-energy, non-food finished goods and services seems thus far to have been limited. But with businesses facing persistently higher input prices, they may attempt to pass through such costs into prices of final goods and services more aggressively than they have done so far.

Moreover, as the foreign exchange value of the dollar has declined, rises in import prices have put greater upward pressure on business costs and consumer prices. In their economic projections for the June FOMC meeting, monetary policymakers marked up their forecasts for inflation during 2008 as a whole. FOMC participants continue to expect inflation to moderate in 2009 and 2010 as slower global growth leads to a pooling of commodity markets, as pressures on resource utilization decline, and as longer-term inflation expectations remain reasonably well anchored. However, in light of persistent escalation of commodity prices in recent quarters, FOMC participants view the inflation outlook as unusually uncertain and cited the possibility that commodity prices will continue to rise as an important risk to the inflation forecast.

Moreover, the currently high level of inflation, if sustained, might lead the public to revise up its expectations for longer-term inflation. If that were to occur and those revised expectations were to become embedded in the domestic wage- and price-setting process, we could see an unwelcome rise in actual inflation over the longer term. A critical responsibility of monetary policymakers is to prevent that process from taking hold.

At present, accurately assessing and appropriately balancing the risks to the outlook for growth and inflation is a significant challenge for monetary policymakers. The possibility of higher energy prices, tighter credit conditions, and a still deeper contraction in housing markets all represent significant downside risks to the outlook for growth. At the same time, upside risks to the inflation outlook have intensified lately as the rising prices of energy and some other commodities have led to a sharp pick-up in inflation, and some measures of inflation expectations have moved higher.

Given the high degree of uncertainty, monetary policymakers will need to carefully assess incoming information bearing on the outlook for both inflation and growth. In light of the increase in upside inflation risk, we must be particularly alert to any indications, such as erosion of longer-term inflation expectations, that the inflationary impulses from commodity prices are becoming embedded in the domestic wage- and price-setting process.

I would like to conclude my remarks by providing a brief update on some of the Federal Reserve's actions in the area of consumer protection.

At the time of our report last February, I described the Board's proposal to adopt comprehensive new regulations to prohibit unfair or deceptive practices in the mortgage market using our authority under the Home Ownership and Equity Protection Act of 1994. After reviewing more than 4,500 comment letters we received on these proposed rules, the Board approved the final rules yesterday. The new rules apply to all types of mortgage lenders and will establish lending standards aimed at curbing abuses while preserving responsible subprime lending and sustainable homeownership.

The final rules prohibit lenders from making higher-priced loans without due regard for consumers' ability to make the scheduled payments and require lenders to verify the income and assets on which they rely when making the credit decision. Also, for higher-priced loans, lenders now will be required to establish escrow accounts so that property taxes and insurance costs will be included in consumers' regular monthly payments.

The final rules also prohibit prepayment penalties for higher-priced loans in cases in which the consumer's payment could increase during the first few years and restrict prepayment penalties on other higher-priced loans. Other measures address the coercion of appraisers' service or practices and other issues. We believe the new rules will help to restore confidence in the mortgage market.

In May, working jointly with the Office of Thrift Supervision and the National Credit Union Administration, the Board issued proposed rules under the Federal Trade Commission Act to address unfair or deceptive practices for credit card accounts and overdraft protection plans. Credit cards provide a convenient source of credit for many consumers, but as the terms of credit card loans have become more complex, transparency has been reduced.

Our consumer testing has persuaded us that disclosures alone cannot solve this problem. Thus, the Board's proposed rules will require card issuers to alter their practices in ways that will allow consumers to better understand how their own decisions and actions will affect their costs. Card issuers would be prohibited from increasing interest rates retroactively to cover prior purchases, except under very limited circumstances. For accounts having multiple interest rates, when consumers seek to pay down their balance by paying more than the minimum, card issuers would be prohibited from maximizing interest charges by applying excess payments to the lowest-rate balance first.

The proposed rules dealing with bank overdraft services seek to give consumers greater control by ensuring that they have ample opportunity to opt out of automatic payments of overdrafts. The Board has already received more than 20,000 comment letters in response to these proposed rules.

Thank you very much. I would be pleased to take your questions.

Chairman DODD. Well, thank you very much, Mr. Chairman. And let me just briefly say I appreciate the efforts of the Fed regarding both credit cards and the things dealing with predatory lending practices. We welcome those rules, and we welcome the suggestions in the credit card areas, and a future point here, we will maybe have more discussion about that. But I wanted to at least reflect

my appreciation of what the Fed has done regarding those matters, and we appreciate it very much.

I am going to put this clock on at 5 minutes so we can give everyone a chance to raise any questions they have on the monetary policy issues. Some of the questions may overlap, and at the conclusion of that, Secretary Paulson and Chairman Cox will be here to have a broader discussion about the proposals being made by Treasury over the weekend.

Let me, if I can, jump to the economic projections for 2009, the concerns about economic growth that you have raised in your statement here this morning. Given the fact that we have, as you point out, acknowledged the risk to your forecast for economic growth are skewed to the downside, to use your words, and given the fact that the stimulus package is about to—the effects of it are going to run out by the end of the year. The housing crisis continues, obviously, as we all know painfully. Gasoline prices, as you point out, are at record levels, costing consumers tremendously. The issues involving the weakness in the labor market are significant, 94,000 jobs lost every month for the last 6 months on a consistent basis. Inflation, as you point out, while it may abate in the coming years, it certainly is going to be with us for some time.

What suggestions do you have for us in all of this? And I realize you may want to reserve some final judgment on the effects of the stimulus package and will not know the full effects of that until maybe toward the end of the year. But as we look down the road as policy setters here in the Congress looking at ideas, including a possibly a second stimulus package, one of the suggestions we made to increase productivity is to invest more heavily in infrastructure, the infrastructure needs of the country.

I wonder if you might just share with us your views as to what ideas, as a menu of ideas, without necessarily embracing one or the other, but what you would be planning to do rather than just sort of waiting out the year and a new administration coming in, we will be leaving here, adjourning in late September, early October, maybe coming back, maybe not until after inauguration of the President late in January, it seems to me this would be an opportune time for us to be considering very seriously policy considerations that would provide for greater economic growth and opportunity than what we are presently looking at.

Mr. BERNANKE. Mr. Chairman, I think that the central issue in the economic situation right now is the housing market. It is the continued uncertainty about house prices and housing activity which is creating financial stress, is affecting consumer wealth and consumer expectations and causing the stress we are seeing in the economy. So my suggestion would be in the near term to focus on issues related to housing. I understand that you have already passed a bill that would address, for example, GSE reform. We need the GSEs to continue to be active in supporting the mortgage markets, as well as FHA modernization and other steps that Congress determines would strengthen and support mortgage finance in the housing sector. I think that is the most critical central issue we face.

On a second stimulus package, my own sense is that we are still trying to assess the effects of the first round. It appears that it

does seem to be helping. But it might be a bit more time before we fully understand the extent to which additional stimulus may or may not be needed.

If additional stimulus is, in fact, invoked, it would be important to find programs that would be, as in the first round, timely, temporary, and targeted, in particular, that would take place quickly and would put money into the economy relatively quickly.

In the case of infrastructure, it is often well justified on its merits, but one would have to ask whether the flow of funding would go into the economy in a relatively prompt way, or would there be long delays associated with the planning process?

Chairman DODD. But your objections or concerns, they are not about the effects of that in the longer term but more the near-term benefits of it.

Mr. BERNANKE. Addressing the infrastructure issue in the United States is very important since infrastructure is a critical part of the economic underpinnings. But except for those cases where the infrastructure spending would have immediate impact on total spending, I would suggest that those projects be evaluated on their own merits in terms of their ability to contribute to the overall strength of the economy in the longer term.

Chairman DODD. I have a last question for you dealing with gasoline prices, and, again, let me first of all commend you because you did something different than your predecessor. In the past, we have excluded in the consideration of inflation gasoline or energy pricing and food. And if you do not drive a car, heat your home, or put food on the table, I suppose that has some relevance here. And I understand the macroeconomic value of excluding energy and food. But for average Americans, excluding those two necessities hardly reflects real inflation. And so the fact that you are now adding those to real inflation is very welcome, and I thank you for it.

I wonder if you might comment briefly on the notion, how is it—and I understand your points about demand in the country and around the world and supply issues. But it strikes many of us here in the speculation area, and you said the need to look at transparency issues and the like are warranted. But it seems to me in 1 year's time to go from $60 or $70 a barrel to this morning I think it is hovering around $150 a barrel has to be explained in terms other than just normal economic pressures that it created.

Does it concern you at all about margin requirements, for instance, in the area of speculation where the margin requirements are somewhat different in the area of energy pricing than they are for other commodities that there should be some leveling of the playing field when it comes to margin requirements, as an example of what might come as a response?

Mr. BERNANKE. I would just like to comment briefly that the Federal Reserve and the CFTC are part of a task force which is gathering data analyzing these issues and hope to bring some more explicit recommendations to you later this summer or early fall.

Margin requirements serve two purposes. They can affect the cost of credit, but they also are a very important part of the counterparty risk management process for exchanges. And so we need to be careful in changing margin requirements that we do not

interfere with these other important functions or that we do not unnecessarily reduce the liquidity in those markets. But we are certainly looking at these issues, and we hoped that they would bring to you some ideas.

Chairman DODD. You will be looking at that one specifically, the margin requirement issue. Is that——

Mr. BERNANKE. We will be looking specifically at the whole range of issues about transparency, practices, positions, and so on.

Chairman DODD. Thank you very much.

Senator Shelby.

Senator SHELBY. Mr. Chairman, I have a number of questions that I would like to submit for the record dealing with monetary policy.

Chairman DODD. That will all be done, by the way. Any questions people have and they do not feel they have enough time on monetary policy, we will make sure the Chairman gets them.

Senator SHELBY. Chairman Bernanke, you are also a bank regulator, the Federal Reserve, and I know that you are not the primary regulator of IndyMac, which was the largest bank failure since 1984, Continental Illinois. Why did that bank fail? And could it have been prevented? What is your take on it? And is that just the beginning of a number of bank failures that you should be concerned with and we should be concerned with in this country?

Mr. BERNANKE. Well, Senator, as you point out, we are not the primary regulator of that institution, but we were involved in it——

Senator SHELBY. Absolutely.

Mr. BERNANKE. ——because the Federal Reserve Bank of San Francisco was attempting to assist in the wind down, and we certainly had extensive communication with the FDIC and the OTS about that bank.

My assessment of IndyMac is that it was particularly weighted down with low-quality mortgages, subprime and other exotic mortgages, and those losses created a capital hole that it was unable to fill. So in that respect, I think its failure, barring acquisition by another firm, which did not occur, was inevitable. So, again, I think it was basically the asset quality of the bank that had that effect.

Of course, all banks are being challenged by credit conditions now. The good news is that the banking system did come into this episode extremely well capitalized, extremely profitable. I do not have any forecast to make. I think Chairman Bair gave a good discussion yesterday about the pressures that banks are facing, and she discussed her list of problem banks.

I suppose it is a bit of good news that most of the problem banks that she had is a far smaller list than we have seen in some episodes in the past, in the 1990s, for example.

Senator SHELBY. Overall, looking at our banking system, could you say today here in the Senate that you believe as Chairman of the Federal Reserve that our banking system is stable and capitally strong?

Mr. BERNANKE. Our banking system is well capitalized. They came in with strong capital. We are watching the situation very carefully. My concerns have turned less on the solvency of these institutions and more on their ability to extend the credit that our

economy needs to keep growing, because in many cases banks are deleveraging or shrinking or are reluctant to raise the extra capital needed to take advantage of business opportunities. So that is more my concern than solvency concerns.

Senator SHELBY. Let's briefly, because I have just got a couple of minutes, focus on the GSEs, and we will get into it more when the Treasury Secretary gets here and the Chairman of the SEC. Is this just a stopgap measure or is this a real approach to fundamentally reform the GSEs? A lot of us, you included, have been advocating that right here on this Committee for a long time. We did not have a lot of help from certain people, some of our friends, and Fannie Mae and Freddie Mac have some of the most powerful lobbyists, believe me, in Washington. And I do not believe that they are going to like some of the things that I believe we have to come forth with now. But is this just a piecemeal deal? Because we have got systemic risk here. Where do we go? Will this do it, in other words, or will this just be postponing the inevitable?

Mr. BERNANKE. Well, Senator, our goals at this point should be to protect the financial system, to protect the taxpayer, and to strengthen and support the housing market. There are a number of steps that we need, but I think a critical step would be——

Senator SHELBY. What are the three most important steps?

Mr. BERNANKE. The most important step will be to get a strong, bank-like, world-class regulator that will be able to provide assurance to the public, to the taxpayer, and to the investors that these firms will be well capitalized and able to maintain and support their core mission, which is to support mortgage financing in the United States. So I would say that is job one.

Then we need to think about what else is needed to make sure that they are, in fact, strong enough financially and there is enough confidence that they can, in fact, carry out their mission. And, again, the taxpayers' interest must be protected.

Senator SHELBY. Thank you, Mr. Chairman.

Chairman DODD. Thank you.

Senator Menendez.

Senator MENENDEZ. Thank you, Mr. Chairman. Thank you, Chairman Bernanke, for your testimony and your successful.

I want to visit with you on the housing issue. In March of 2007, you said that, "The impact on the broader economy and financial markets of the subprime market seems likely to be contained." And I assume you would want to change that statement today somewhat, amend it, with the ability of 20/20 hindsight.

What do you think in the housing crisis, do you see it hitting rock bottom this year? A year from now? Because this is one of the significant challenges within the economy. What do you see on the horizon?

Mr. BERNANKE. Well, first, of course, I would like to revise and extend my remarks from March of 2007. The issue was that the subprime crisis triggered a much broader retreat from credit and risk taking, which has affected not just subprime lending but a wide variety of credit instruments. And that is why it has become a much bigger element in the situation than, frankly, I anticipated at that time.

The housing market is still under considerable stress and construction is still declining. I do believe that we will start to see stabilization in the construction of new homes sometime later this year or the beginning of next year, and that will be a benefit because the slowing construction pattern has been subtracting about 1 percentage point from the growth of the GDP going back now for some time. So that will be a benefit.

House prices may continue to fall longer than that because of the large inventories of unsold homes that we still face. And then I would have to say that there is uncertainty about exactly what the equilibrium level that house prices will reach is. Unfortunately, it is that uncertainty, which is generating a lot of the stress and risk aversion we are seeing in financial markets.

It is for that reason—the need to find a footing, to find stability in the housing market—that I do think that action by this Congress to support the housing market through strengthening the GSEs and FHA and so on is of vital importance.

Senator MENENDEZ. Let me talk about the other major driver, then, of what is happening to our economy, and that is the whole question of energy prices and oil. You know, I appreciate in your answer to the Chairman and in your testimony, because we have had testimony before the Congress by all executives who say that the difference between supply and demand over the last 2 years would largely lead us to a concern that, in fact, speculation may have driven the price of oil up an additional $50 a barrel. You have the view that that may not be the most significant thing in prices, but you do take the view that useful steps can be taken to improve the transparency and functioning of future markets.

Are you ready to say to the Committee today what some of those useful steps are? Or are you still depending upon that Committee that you are meeting with to look at that? Because we do not have a lot of time here.

Mr. BERNANKE. Senator, this is really the CFTC's function and responsibility. We are trying to assist them, and we are trying to work as quickly as possible to gather information and try to make some useful recommendations.

Senator MENENDEZ. Well, many of us believe we need to pursue market speculation now as a critical element of helping to drive down particularly gas prices. Let me ask you this: There is one thing squarely within your realm, and that is the question of a weaker dollar.

In 2000, we ran a budget surplus. Ever since then, the Federal Government has been running up larger budget deficits. We added to that a $1.6 trillion tax cut and a $700 billion war that would generally contribute to a larger budget deficit. And if you look at that and you look at the twin deficits of both trade and the budget in combination, you have a low—with a low domestic savings rate, you have all of the makings of a weakening dollar.

In 2002, the barrel of oil cost $23 and 23 euros. Now it costs—well, the Chairman had even a higher figure than I had. I had $145 and 90 euros. I am sure it just changed overnight.

Do you agree with the Commodity Futures Trading Commission and others that the weakening dollar has contributed to the higher price of oil as an elemental part of our challenge?

Mr. BERNANKE. I do agree, and I said so in my testimony. It should be noted that the decline in the dollar from 2002 reversed an appreciation of the dollar that had taken place from the early 1990s until that point. And it is related to the dynamics of our trade deficit, as you alluded to.

In the late 1990s and early 2000s, strong capital inflows drove the dollar up, but that made up less competitive and created a trade deficit. Some of that has to be unwound to bring us back toward a better balance of trade, and, in fact, we had been seeing considerable improvement in our balance of trade as the dollar reversed that increase. But we also import a lot of oil, and because we import it, when oil prices rise, that also works in the other direction. It tends to hurt the dollar. So there is really causality going in both directions.

Senator MENENDEZ. Thank you, Mr. Chairman.

Chairman DODD. Senator Bennett.

Senator BENNETT. Thank you very much, Mr. Chairman.

Welcome, Chairman Bernanke. I have the same kinds of questions everybody has with respect to the deal made over the weekend for Fannie and Freddie, but I will save those for the next panel.

Let's talk about your forecast. The GDP for the first quarter was originally forecast at six-tenths of 1 percent and then nine-tenths of 1 percent and then at 1-percent growth. It has always been raised as the data come in. We have had a bear signal on the Dow theory. I don't know whether you follow that or not, but there has been a lot of that in the newspapers, which I know you do follow that. Whether you believe the Dow theory or not, you follow it. I don't know whether you believe it or not. That is a separate issue. But, nonetheless, we have got a bear signal that says we are now in a bear market, which historically lasts for anywhere from 18 to 24, 30 months, something of that kind.

The blue chip forecast for the second half has always been for growth—slow to be sure, relatively low to be sure, but for growth. And in your previous appearances before the Committee in this kind of a context, you have pretty much been in that same territory. Are you still there?

Mr. BERNANKE. Well, as your point about the first quarter makes clear, even after the fact, it is sometimes hard to know exactly how much growth there was. Yes, our forecast calls for growth in the second half, but relatively weak. Part of what seems to have happened is that perhaps the fiscal stimulus or other factors—some of the growth that we anticipated—has been pulled forward into the second quarter, which looks to be doing somewhat better, frankly, than we anticipated. So our forecast——

Senator BENNETT. You mean pulled forward into the first quarter?

Mr. BERNANKE. No. To the second quarter, the current—the quarter that just ended.

Senator BENNETT. Oh, yes. All right. I am second half so that is—OK. Right.

Mr. BERNANKE. So the second quarter appears to be actually better than expected, and, therefore, our forecast for the entire year might actually be stronger than it was earlier. But with that

strength having been brought forward to some extent into the second quarter, we are looking at the remainder of the year as being probably positive growth, but certainly not robust growth.

Senator BENNETT. The one thing the markets hate more than anything else is uncertainty, and I have the feeling that that is part of the problem with respect to oil prices and part of the problem with respect to the housing market.

Now, you have suggested that the housing market might stabilize over the next 6 to 12 months so that people will begin to say, OK, we have now reached bottom and we are starting to build back up again. Do you feel that the deal that was made over the weekend with Fannie and Freddie can help eliminate some of the uncertainty and cause people to have a greater degree of confidence that the timeframe that we have been talking about will indeed come to pass?

Mr. BERNANKE. Well, Senator, no deal was made. All that was done was a proposal was made to bring to Congress——

Senator BENNETT. I am using newspaper talk. I realize that is always a mistake.

Mr. BERNANKE. But as I said earlier, I think the housing sector, together to some extent with oil, is at the heart of the current uncertainty, the current situation. I think were it to happen that there would become a general view that the housing situation had stabilized, you would see actually a very strong bounce-back in the economy and the financial markets, and it is the uncertainty about when that happens that remains a problem.

Again, it is the Congress' prerogative to decide what to do about the GSEs and other housing-related legislation. But as I tried to indicate before, I think the best thing that we can do to remove this uncertainty and to speed the recovery is to make sure that the housing market and the mortgage finance markets are functioning as well as possible.

Senator BENNETT. Yes, but very specifically, taking away the word "deal"—and I agree with you that even though that is the word we have seen in the press, that is probably not the right word. But the structure that you have agreed to in terms of some kind of a back-up for the GSEs, should they get in trouble, do you have the feeling that the announcement of the terms of that structure should remove some of the uncertainty with respect to their future?

Mr. BERNANKE. Yes. I think right now that, in fact, part of the reaction in markets has to do with the uncertainty about exactly what the deal, as you call it, might look like. So if there is clarity which provides assurances that the GSEs will have the financial strength they need to support the mortgage market, and, second, as Senator Shelby emphasized, there is also a very strong regulator that will protect the system and protect the taxpayer, the combination of those two things would be very constructive.

Senator BENNETT. I think we know about the regulator. It is the other thing that people are waiting to find out about.

Mr. BERNANKE. I think so, Senator, because right now the GSEs are a very big part of the U.S. mortgage market.

Senator BENNETT. Thank you very much.

Chairman DODD. Senator Casey.

Senator CASEY. Mr. Chairman, thank you very much, and, Chairman Bernanke, I want to thank you for your presence here today and for your testimony.

We have had the opportunity to question you on a number of occasions, I probably more than most because not only am I Member of this Committee but I am also a Member of the Joint Economic Committee, and we are grateful, again, for your testimony today.

I wanted to review just some of the basic data, some of which you were kind enough to put in your statement today in terms of where we are economically in this country. It is, to use an old expression from the 1970s, a "misery index," a "tale of woe," but I think it is important to remind all of us kind of where we are.

You cited on page 3, I guess, of your testimony the average pace of 94,000 jobs per month lost through June. If you look at it another way, just in terms of real GDP, the growth rate over the last couple of years—I had not seen these numbers until recently—2005, 3.1-percent growth, "only" I should say; 2006, 2.9; 2007, 2.2; and then the first quarter of 2008, as was cited earlier, 1 percent. The total job loss the last 6 months, 438,000. You look at the trade deficit just with China alone, that went up even though the overall trade deficit went down. Foreclosures, 8,400 to 8,500 families per day, if you look at just weekdays, entering foreclosure. The projection by Treasury for foreclosures for 2008 is at some 2.5 million. The prices report—there is a story today, a brief story in the *New York Times,* I guess online, sales of retail goods and food grew just 0.1 percent in June. Consumers spent a large amount of money on one product. Of course, gasoline we know, have heard an awful lot about that. But outside of fuel, sales actually dropped last month by 0.5 percent.

All of that is background, of course, to two basic questions I wanted to ask you, one of which I have asked and you have answered over the course of many months in your appearances here.

The first question pertains to the difference between the real world of the impact of this economic crisis on families versus the economist's definition of "recession." And I think, frankly, the old definition or the textbook definition of "recession" does not apply when it comes to what families are up against.

And I think it was probably said best, not by a set of the data points I just read and not by any economist, recently in a story in the *Centre Daily Times* in Pennsylvania, in Centre County, Pennsylvania, "Tammy May, a single mother of two in Pleasant Gap, Pennsylvania, probably said it best in just one line"—and I am quoting her. She is a single mother of two. "Pretty much we have reprioritized. The house payment is first, then day care, then we worry about gas, then food." Food is number four.

So I would ask you, in light of that economic misery that I have just highlighted, and in light of your own testimony, your own work, and I think your own sensitivity to these issues, how do we deal with this question of what is a recession and what it isn't, and do we need some new definitions and some new terminology to better define what is happening to real families and real people?

Mr. BERNANKE. Well, there is a technical definition of recession which has to do with behavior of employment and investor production and other things, and that is a determination that is made by

some economists after the fact. I don't know whether they will determine we have been in a recession or not according to these technical definitions, but I agree with you entirely that whether it is a technical recession or not, the combination of declining wealth, weak job market, rising food and energy prices, foreclosures, tight credit—all those things are putting tremendous pressure on families and explain why consumer sentiment is very low. People are very worried.

So I certainly would never make the claim that even if we were not in a technical recession that it was not a serious situation. And I just want to assure you that everything the Federal Reserve does is intended to try to promote the welfare of the average American, and that is our objective.

Senator CASEY. Thank you. I think I am out of time. I will go to the next question on the second round.

Thank you.

Chairman DODD. I think Senator Bunning, I believe—no, excuse me. Senator Allard. I apologize.

Senator ALLARD. Thank you, Mr. Chairman.

Welcome to the Committee. I always look forward to hearing your comments, Chairman Bernanke. Business lending has—I want to talk about that a little bit, and a big aspect of business lending historically, I am told, has been that business plans and their ability to execute those business plans has been a big factor in assessing credit and whether they get a loan or not. I am told that in recent history that has been minimized considerably.

First of all, I would like to know if that is true. And the other question, if it is true, do you think we could help confidence if we had provisions that somehow or the other brought more accountability to the business plan aspect when you apply for a loan?

Mr. BERNANKE. Well, there is a general tightening in credit and tightening in underwriting standards, you know, related to this pullback from credit risk in general. It has affected different groups differentially. For example, prime corporate borrowers are still able to access the bond market and the loan market pretty effectively. Riskier firms, smaller firms, are having more difficulty accessing credit.

I think that I would encourage banks to continue to make sound loans, and we at the Federal Reserve will not penalize banks that are making sound loans. We want them to extend credit. In assessing how to make a good loan to a business, certainly there are many factors, including financials and personal relationships and many other things, but the business plan is certainly an important part and one that a good bank lender would look at.

Senator ALLARD. You have assumed, meaning the Fed has assumed, a great regulatory oversight authority recently here. Are you comfortable with that? And do you anticipate that you may even take on a greater regulatory role?

Mr. BERNANKE. We have begun to work with, as you know, the Securities and Exchange Commission, who are the primary regulator. We have been working with them to help evaluate and oversee the four large investment banks and the other primary dealers. That is because of the lending facility that we opened up after Bear Stearns. We have a responsibility to protect our loans, and I be-

lieve that the SEC views our participation as helpful in trying to make sure that these firms are sufficiently strong.

It remains to be seen how the Congress would like to think through regulation going forward. I do think that the investment banks need a consolidated supervisor, but have not proposed a particular agency to do that. The key issue is that they have strong consolidated supervision. The only area in which I have raised the possibility of additional powers for the Federal Reserve—in my testimony and in speeches—is in payment systems, which are systemically important and where in most countries central banks have considerable oversight responsibility.

I think it would be useful for the Congress to review how payment and settlement systems are overseen and to ask whether, from a systemic point of view, they are adequately regulated and whether the Fed should have some additional role in that area. Otherwise, we are going to have to do a lot of thinking, all of us, and certainly the Congress, about how, if at all, the regulatory structure should change based on what we have learned in the last year.

Senator ALLARD. Some of the discussions I have been involved in have said that if the Fed assumes a greater regulatory role, it could affect your independence. And I would like to hear you comment on that as acting in your current role.

Mr. BERNANKE. Well, the way Congress wants to organize the regulatory structure is an important question that needs to be worked out, and I am not asking for any change at this moment. However, the Federal Reserve has a wide range of responsibilities, including not only regulatory oversight but also consumer protection, payment systems, and other things. The independence, which is critical, is the independence vis-a-vis monetary policy. And I think we have been able to keep a good separation between monetary policy and these other areas. In these other areas, we are an independent agency, but we have no stronger claimed independence than, say, the OCC would. It is only in monetary policy where we need to maintain a strict independence, you know, in order to make the right decisions.

Senator ALLARD. I noticed on some of the projections into 2009 that they seem pretty positive—that they are better than what we are looking at this year, generally. What part of the economic sector do you see will continue to struggle? And where do you see that growth to improve our economy as we move into 2009?

Mr. BERNANKE. Well, first of all, there are some factors which have been positive and continue to be positive. Foreign trade exports have been a very positive factor and have contributed significantly to our growth, and as that continues, that will be a basis to build on.

I mentioned already the home-building sector. That has already declined quite substantially. It is very likely going to begin to level out somewhere around the end of the year. That leveling out will also provide additional strengths, at least in the sense of not subtracting from the GDP growth.

As the situation begins to stabilize and credit markets begin to stabilize, then I think confidence will return to consumers, and we will see the beginnings of a recovery. But as I noted and as every-

one has made allusion to, the uncertainties of the exact timing of this are still great.

Senator ALLARD. Thank you, Mr. Chairman.

Chairman DODD. Thank you.

Senator Tester.

Senator TESTER. Thank you, Mr. Chairman. Thank you, Chairman Bernanke.

In your statement, you said the world economy was growing at the fastest pace in decades. I believe that is what you said. Do you anticipate that to continue or to decline?

Mr. BERNANKE. I think that this year and going into next year, we probably will see some moderation but still healthy growth.

Senator TESTER. So do you think that those impacts, if it backs off some, will have positive or negative or no effect on our financial situation?

Mr. BERNANKE. Well, it cuts two ways. On the one hand, it might weaken to some extent the contribution of exports and trade to our growth. But, on the other hand, if these other economies cool down, it might reduce commodity prices or flatten out commodity prices, which would be very beneficial.

Senator TESTER. Do you anticipate overall negative, positive, or pretty static in its effect?

Mr. BERNANKE. Sorry?

Senator TESTER. I know it is a two-edged sword, but do you anticipate it will be positive, negative, or negligible?

Mr. BERNANKE. I think it will be probably positive if it contributes to a slowing in commodity prices.

Senator TESTER. You talked about the long-term oil supplies are down. I believe that is what you said.

Mr. BERNANKE. Well, not rising.

Senator TESTER. Is that domestically, worldwide, or both?

Mr. BERNANKE. Well, certainly oil supplies are declining in the United States. Worldwide, they have been relatively flat.

Senator TESTER. OK. Senator Menendez talked about the dollar and the value it has on oil. Does the budget deficit have any effect on the value of the dollar?

Mr. BERNANKE. Perhaps a weak effect, but I don't think it is a first-order effect. The linkage between the budget deficit and the trade deficit is there because the trade deficit does reflect our national savings and investment imbalance. But, empirically, the effect is relatively weak under most circumstances.

Senator TESTER. And the value of the dollar has devaluated by about 40 percent—is that correct?—over the last 4 or 5 years.

Mr. BERNANKE. No. I think it is more like 25 percent. And, again, it has reversed a considerable appreciation prior to that peak in 2002.

Senator TESTER. Are you comfortable with where the dollar's value is now?

Mr. BERNANKE. I am looking for the economy to strengthen next year, and as it does, I think that will support a strong dollar going forward.

Senator TESTER. Do you anticipate it—OK. That is fine.

Is there anything that you see on the horizon that could impact the credit rating for the Treasury?

Mr. BERNANKE. No, I don't. In the very long term, or even the medium term, we need to address these large issues of entitlements and the aging population, and there are tremendous challenges involved there. I don't think anything in the next short period of time, including issues related to the GSEs, for example, would affect the credit rating. That is my understanding, for example, based on statements that some credit raters have made.

Senator TESTER. And we will get into this in the next panel, but what you are saying is that even if we don't do anything with the bill that is being proposed on the GSEs, you don't think that could have any negative impact on the credit rating?

Mr. BERNANKE. If we don't do anything?

Senator TESTER. If we don't do anything, if we just let it play out.

Mr. BERNANKE. No, I don't think so. I don't think it would, no.

Senator TESTER. OK. You stated earlier in your testimony that the housing is really kind of the root of what we are seeing, the housing contraction. From my perspective, we have kind of gone into a credit economy. Do you see that as being another part of this equation that is kind of a boat anchor on our economy, that we are making adjustments out of this? Or do you anticipate we are going to be in this, what I would say is a credit economy, from now on?

Mr. BERNANKE. Well, a part of what has been happening—and this goes back to Senator Menendez's question about the role of the subprime crisis and so on—is that there was, if you will, a credit boom or a credit bubble where there was an overextension of credit in a lot of areas. There has been a big reversal of attitudes. Banks and other financial institutions are scaling back on their credit risk. They are deleveraging. They are raising capital. And that adjustment process is part of what is happening now that is creating the drag on economic growth. So it is harder to get a mortgage, it is harder to get a business loan. And until we come to a more stable situation where banks are comfortable with their credit standards and their balance sheets, the leveraging process is going to continue and is part of what we are seeing here.

Senator TESTER. And very quickly, because my time is over, do you—I mean, we have heard figures of 150 banks potentially going down because, I assume, of this adjustment that you just talked about. Do you guys have any projections on what kind of impact banking institutions going down, how many there potentially could be in the next year or do you not want to comment on that?

Mr. BERNANKE. I think I would just refer you to Chairman Bair's list and discussion from the last couple of days. We don't have a projection.

Senator TESTER. How many are on that list?

Mr. BERNANKE. About 95, as I recall. As I said, I think the banking system came into this episode with good capital basis and with strong earnings.

Senator TESTER. OK. Thank you, Mr. Chairman. I appreciate that. Thank you.

Chairman DODD. Thank you very much.

Senator Bunning.

Senator BUNNING. Thank you, Mr. Chairman. Since I did not give an opening statement, I want to give an opening statement in

all deference to Chairman Bernanke. I know we have a lot of ground to cover today, but I want to say a few things on the topic of this hearing and the next.

First, on monetary policy, I am deeply concerned about what the Fed has done in the last year and in the last decade: Chairman Greenspan's easy money in the late 1990s and then followed the tech bust, inflated the housing bubble, and created the mess we are in today. Chairman Bernanke's easy money in the last year has undermined the dollar and sent oil prices to a new high every day, and an almost doubling since the rate cuts started. Inflation is here and hurting us and the average American, and it was brought out very clearly by the Senator from Pennsylvania.

Second, the Fed is asking for more power, but the Fed has proven they cannot be trusted with the power they have. They get it wrong, do not use it, or stretch it farther than it was ever supposed to go in the first place. As I said a moment ago, their monetary policy is the leading cause of the mess we are in. As regulators, it took until yesterday to use the power we gave them in 1994 to regulate all mortgage lenders. Then they stretched their authority by buying $29 billion worth of Bear Stearns assets so JPMorgan could buy Bear Stearns at a deep discount.

Now the Fed wants to be a systemic risk regulator, but the Fed is a systemic risk. Giving the Fed more power is like giving a neighborhood kid who broke a window playing baseball in the street a bigger bat and thinking that will fix the problem.

I am not going to go along with that, and I will use every power in my arsenal as a Senator to stop any new powers going to the Fed. Instead, we should give them less to do so they can get it right, either by taking their monetary responsibility away or by requiring them to focus only on inflation.

Third, and finally, since I expect we will try to get it right to question the next hearing, let me say a few words about the GSE bailout plan. When I picked up my newspaper yesterday, I thought I woke up in France. But, no, it turned out it was socialism here in the United States of America, and very well, going well. The Treasury Secretary is now asking for a blank check to buy as much Fannie and Freddie debt or equity as he wants. The Fed purchase of Bear Stearns assets was amateur socialism compared to this. And for this unprecedented intervention in our free markets, what assurance do we get that it will not happen again? Absolutely none.

We are in the process of passing a strong regulator for the GSEs, and that is important. But it allows them to continue in the current form. If they really do fail, we should let them go back to what they were doing before? I doubt it.

I close with this question, Mr. Chairman. Given what the Fed and Treasury did with Bear Stearns, and given what we are talking about here today, I have to wonder what the next Government intervention into the private enterprise will be. More importantly, where does it all stop?

Thank you.

Chairman DODD. Do you want to respond to that, Mr. Chairman?

[Laughter.]

Chairman DODD. Senator Bunning just does not have any strong views on these matters. I wish he would be more clear in the future when he speaks.

Mr. BERNANKE. Well, I think some of the problems with the GSEs that you allude to were pre-existing. I mean, the moral hazard issue, the Government implicit guarantee, those——

Senator BUNNING. We tried to pass a bill. We could not get it——

Mr. BERNANKE. And I agreed with——

Senator BUNNING. We passed it here.

Mr. BERNANKE. And I agree with you.

Senator BUNNING. And it got stuck between here and the floor of the Senate.

Mr. BERNANKE. And I agree with you on that. As far as powers are concerned, as I mentioned earlier, I think we ought to review the payment system issue which is something that other central banks have. But I have not asked for any other powers.

Thank you.

Chairman DODD. Very good.

Senator Reed.

Senator REED. Thank you, Mr. Chairman.

You indicated in your opening statement that in this economic turmoil the banking system is approaching it with good capital levels. Your estimate is based upon not just their balance sheet, but their off-balance-sheet arrangements. I understand there are new anything rules that will shortly be enacted that will require much more recognition of off-balance-sheet activities. Have you looked at the fully diluted value of the balance sheets? And can you still make that assessment?

Mr. BERNANKE. I don't think we have done a full assessment. Those rules are yet to be clarified, and I think it may well be some time before they are enacted. At such time we will obviously think hard about how it affects those ratios.

Senator REED. But you are beginning to consider much more, I hope, focus on some of these off-balance-sheet——

Mr. BERNANKE. Oh, certainly. For a long time we have been aware of those off-balance-sheet vehicles. There were some things we did not appreciate. I think one of the issues we did not fully appreciate was what is referred to sometimes as the moral recourse issue, which is that off-balance-sheet vehicles, which are not technically owned by the bank, nevertheless the bank feels for reputational reasons it needs to assume them in a difficult period. We have been thinking about the capital requirements in those kinds of contexts. But we have certainly been quite attentive to off-balance-sheet vehicles, very attentive in particular since this crisis began in August.

Senator REED. Let me refer to another issue in your statement. You indicated that one of the contributing factors to the present increase in oil prices is the lack of investment over the last several years. Now with oil at extraordinarily high prices, one would think in a simple market model that investment would be accelerating rapidly.

Is investment in new drilling and new production and new refining, is that taking place?

Mr. BERNANKE. In some places, but not to the extent you might think. Part of it is bottlenecks in the materials and manpower and expertise that goes into drilling and development. Part of it is the fact that a large share of the world's oil is controlled by national governments who may not have the same immediate profit motives as a private driller might have. In particular, some countries prohibit foreign technology or foreign investment in their oil production. So there are these political constraints as well that have been affecting the supply as well as economic bottlenecks and other problems.

Senator REED. Is there a lack of adequate fields to exploit worldwide? Is that one of the significant factors?

Mr. BERNANKE. Well, experts have some disagreement over this, but in terms of proved reserves, there seems to be adequate oil in the ground. It is really a question of exploiting it.

Senator REED. You indicated that in terms of speculation, that was not a significant factor, but you are, with the CFTC, looking into the issue of possible speculation. And I am getting into dangerous ground. You are an economist and I am not. But it would seem to me this is a market that would be ripe for speculation. Demand is highly inelastic. Price signals are blunted in many countries because of subsidies. Is that your understanding of the market, that there is an opportunity at least for speculation in this particular market for oil?

Mr. BERNANKE. Well, there is speculation, but speculation under most circumstances is a positive thing. It provides liquidity and allows people to hedge their risks. It provides price discovery. It can help allocate oil availability over time, depending on the pattern of futures prices and so on.

What is really a concern—what the CFTC, for example, is concerned with would be manipulation as opposed to speculation.

Senator REED. Well, I will use the term "manipulation" in the same situation.

Mr. BERNANKE. And as I said, you know, transparency and data collection are important aspects of assuring there is no manipulation. But given the enormous size of this market, it is quite a difficult market—would be quite a difficult market, I would think, to corner.

Senator REED. Thank you. My time is about to expire.

Thank you, Mr. Chairman.

Chairman DODD. Thank you very much, Senator.

Senator Dole.

Senator DOLE. Chairman Bernanke, in December of last year——

Chairman DODD. Senator, would you just postpone for 1 second? What I am going to do here with Members, by the way, is several Members who have already asked questions have gone to vote, and they will come right back. And this way we will try and keep going. If there is going to be a minute or two before you get to question, I suggest you go vote and come back. We are not going to interrupt. I want to give everyone a chance to get one round in on this before we move to our larger panel.

Senator Dole, please.

Senator DOLE. In December of last year, Attorney General Cuomo of New York entered into an agreement with Fannie Mae,

Freddie Mac and OFHEO to create a mortgage appraiser code of conduct. While everyone appreciates the goals of this agreement, the code leans heavily toward inconsistent and potentially counterproductive regulation of the lending industry and, if implemented poorly, could actually increase costs of obtaining appraisals and slow down the process of obtaining appraisals.

Recognizing that the current settlement recommendations are inconsistent with current appraisal regulations and guidelines issued by the FFIEC Subcommittee on Appraisals, what are you doing to ensure that implementation of the code of conduct does not further disrupt the current housing and mortgage crises on federally regulated banking institutions? What can you do?

Mr. BERNANKE. Senator, as I understand, the agreement requires acceptance by the FFIEC, by the bank regulators, and so we are currently looking at it, and we do want to make sure that it does not prevent banks, for example, from using their own appraisers in situations where they need that information to make a good appraisal. And we want to make sure it does not impose excessive costs—there are already guidances by the regulators about how to do appraisals which already exist for banks. And we think those are pretty good, and we want to make sure there is no inconsistency. So we are looking at that, but we want to be particularly careful about some of the issues that you have just raised.

Senator DOLE. As you are aware, the FDIC gathers and monitors various bank performance data for its member institutions as part of its regulatory oversight, and this is on a quarterly basis, of course. Ending with this most recent data collection period, the end of the first quarter of 2008, the FDIC's data indicates that banks in North Carolina are on fairly good footing relative to its peer group nationally. But the report did show the number of unprofitable financial institutions with a market cap under $1 billion in my home State increased from the previous quarter, while the national numbers actually improved.

My question for you is whether the Fed currently reviews the performance of smaller financial institutions such as community banks as a proxy for the health of the local economy in which they served. And if so, how does this information factor into Fed policy?

Mr. BERNANKE. Senator, we absolutely do look at community banks. We have a regulatory responsibility for State member banks, which include many, many small banks that we oversee in conjunction with the State regulator or with the FDIC. There are many benefits of our regulation of those banks in terms of what we learn, but, in particular, as you point out, small banks have their fingers on the pulse of the local economy, and they can provide us a lot of useful information about what is happening. And for the same reason, we are required to have bankers on the boards of the reserve banks around the country so that we can gather information from them and benefit from their insights.

Senator DOLE. Thank you very much, Mr. Chairman.

Thank you.

Chairman DODD. Thank you, Senator Dole.

Senator Brown.

Senator BROWN. Thank you, Mr. Chairman. Chairman Bernanke, thank you. Nice to see you again, and thank you for your public service.

I appreciate the Fed has finalized its regulation for some prime mortgage lending. In my view, as you know, this comes, especially in a place like Ohio, several years too late. Hindsight, of course, is near perfect, but there were lots of voices and warning signals trying to get the Fed to act both here in Washington, also at places like the Cleveland Fed and elsewhere.

First of all, I appreciate the refreshingly different approach you have to this job and to this issue than that of your predecessor. I think that is very good for our country. But there is a certain cynicism in the public at large how, when Bear Stearns gets in trouble, when Fannie and Freddie get in trouble, that you act, that Congress acts, the Treasury Department acts, but we do not act so quickly, neither the regulatory system, the Fed, the Congress act so quickly in protecting the public and the issues that Senator Casey, the story Senator Casey brought up.

Tell me what steps we need to take, and you need to take especially, to get the same rapid response for consumers, for consumer protection, that we have achieved, if you will, with Bear Stearns and with Fannie and Freddie.

Mr. BERNANKE. Well, Senator, first, although I know it is not always easy to explain, our actions, as I said earlier, with respect to Bear Stearns, with respect to Fannie and Freddie, with respect to the financial system in general are based on our view that financial stability is critical to economic stability. I think the benefit is more obvious to the average person from Fannie and Freddie because they, after all, are providing liquidity for mortgages, and people want to be able to have access to mortgages. So I just do not accept the distinction between helping Wall Street and helping Main Street. The actions we have taken are aimed at supporting the overall economy and helping the average American.

With respect to your question, I agree that there was a delay in recognition of this issue. Once we undertook it, though, we had to go through a regulatory process that involves developing regulations, putting them out for comment, re-evaluating them and so on. There is a natural period of time. I think that is probably a good thing in the sense that we want regulations to be well thought out and so on. But to the extent that Congress wants to act more quickly or is concerned about the constraints on the agency's powers given to them by their enabling legislation, Congress, of course, can act very quickly if they need to.

Senator BROWN. While I do not oppose your actions on what we are going to try to do with Fannie and Freddie, and I think we did what we had to do with Bear Stearns, I think there is a perception, and probably a reasonable perception, a deserved perception, that our Government, whether it is regulatory process or the Congress, is much more apt to move quickly on Wall Street when we do not move so quickly on Main Street. Granted, you had to go through a process, and as I say, I think you are refreshingly different from your predecessor. But what can you do to speed that up so the public really can be assured that while it does make sense for the economy as a whole, which helps everyone on Main Street, too, doing

the right thing with Wall Street, but it is pretty clear that when—and the Bush administration really did not seem to think there was a subprime crisis until it spread to Wall Street. When it was just Main Street, Mansfield, and Main Street, Zanesville, it did not seem to be much of a problem.

Mr. BERNANKE. Well, we just have to do a better job, first of all, monitoring what is going on. The Treasury Secretary had an interesting idea. The mortgage origination commission, I think it was called, would be evaluating the quality of the State regulators to make sure that State-regulated institutions were being adequately supervised. So that is one possible suggestion. But in a way of keeping better tabs on what is going on, we need to be more vigilant, and we need to be as effective and rapid as possible in promulgating good regulations. But, again, the legal process and our responsibility to do a good job means that we cannot produce the regulations in a month. It really does take some time for us to do all the work, including one thing we have done at the Fed, which is a lot of consumer testing, to make sure that people understand disclosures, for example. We think we get more effective regulation that way.

Senator BROWN. Does the Fed have a mechanism to listen better to the regional—when the Cleveland Fed feeds you information about a problem that may come to Cleveland before it comes to New York or before it comes to Chicago or Los Angeles, do you feel like the Fed here is listening to places like Cleveland the way that you should?

Mr. BERNANKE. Absolutely. The 12 reserve banks around the country were created to make sure that the Fed always had a national constituency, that it always listened to the concerns of the whole country and not just the financial sector, and that works very effectively. We do have a lot of input from reserve banks and their boards, their advisory councils, their contacts. And related to my reply to Senator Dole, those kinds of contacts are useful in a macroeconomic monetary sense, but also in a regulatory sense as well.

Senator CARPER [presiding]. The Senator's time has expired. When Senator Martinez returns, it will be his time to ask questions, but until he does, I am going to ask a few of my own. Welcome, Mr. Chairman.

I was reflecting. How long have you been Federal Reserve Chairman now?

Mr. BERNANKE. Two-and-a-half years.

Senator CARPER. Does it seem that long?

[Laughter.]

Mr. BERNANKE. About that long.

Senator CARPER. Did you ever imagine in your wildest dreams that the Federal Reserve would end up being called upon to do the kinds of things you have done in recent months? I remember when you were going through your confirmation hearing, we focused, as I recall, on just what should be the right rate of inflation, kind of, if you will, the window or the limits for the rate of inflation. I do not think we ever asked you whether or not the discount window should be made available to investment banks. I do not think we ever asked you if the discount window should be made available to

Fannie or to Freddie. I do not think we ever asked you about trying to arrange the marriage, if you will, of JPMorgan Chase with Bear Stearns.

All that stuff has just come along, and I want to commend you and those with whom you serve, those who you lead, for the way you have responded, and quickly, thinking outside the Box, and trying to help us through all of this. I thought you said a great truth in terms of where we want to position ourselves as we come out of this fall. We have seen this drop in housing values, and I think part of what is going on here in our economy today is the loss of confidence you have alluded to. We have seen a loss of home equity, and a lot of us in this country have treated the equity in our home as a piggy bank, and the wealth effect that we derive from that, and couple that with going up to the gas pump and spending $80 or $90 to fill up the tank of our vehicles—I think the two of those together has a dramatic negative effect on our confidence in this country and has sort of led to it.

One of the questions you were asked earlier—and I want to follow up on it—was: Where do we want to be when we bottom out? Eventually, we will bottom out. There are a lot of people who are renting today that are not buying, but eventually they are going to want to get in. They are going to want to be homeowners. What are the things that we need to be doing to make sure that when they are ready to move, when they think that we have come to the bottom and prices are starting to go back up? Just say again, how do we want to plow the field, how do we want to prepare the field in terms of a mortgage market and in terms of housing markets? And you have said some of this already. I just want you to re-emphasize it, please?

Mr. BERNANKE. Well, of course, fundamentally the market will do it. The free market will do it. But there are things that we can do. The Federal Reserve has already tried to address, some of the regulatory aspects of high-cost mortgage lending. We and our fellow regulators are also looking at the treatment of mortgages by banks and other lenders in terms of their capital and how they manage that. I think the banks and the private sector themselves are rethinking the standards, the underwriting standards, the loan-to-value ratios, those sorts of things as they go forward.

So, I anticipate that we will have a healthy recovery in the housing market once we have gone through this necessary process. But it will probably be less exuberant than we saw earlier with somewhat tougher underwriting standards, more investment due diligence, probably less use of securitization or complex securitized products. But I am confident that, with the appropriate background—I probably include here the GSEs and FHA—the housing market will recover, and it will help be part of the economy's return to growth.

Senator CARPER. One of my colleagues asked you earlier about the drop in the value of the dollar and asked you quantify that. I will not ask you to do that again. But we have seen the dollar drop, whether it is 20 percent or 30 percent or some other number. We have seen exports, conversely, rise, but yet we have seen a continued loss in manufacturing jobs in this country. I think the last

month I noticed maybe 30,000 or 40,000 additional manufacturing jobs had been lost.

When do we see that turn around? And what do we need to do to turn it around, the loss of manufacturing jobs, that is?

Mr. BERNANKE. Well, there has been an ongoing loss of manufacturing jobs even during periods of growth in production because the U.S. manufacturing sector is enormously productive and its productivity has been growing more quickly than the rest of the economy. And so even when output is growing—and we have some of the best growth and the highest productivity growth in manufacturing of any industrialized country—because of the high productivity growth, you need fewer workers to make the same amount of output.

Now, one thing that has certainly been clear, and we have seen in the U.S. manufacturing over the last few years, is an increasing emphasis on sophisticated high-tech exports, including capital goods and so on. And what I hear from manufacturers is that they have plenty of low-skilled workers, but what they need are workers with high skills—not necessarily a college degree, but with skills, like welding and machine work and so on. And, in fact, the number of skilled manufacturing workers has actually been rising, not falling.

So I think the future for us is to continue to go to more and more sophisticated manufacturing products, but to support that and to make sure there are good jobs associated with it, we need to have the training and education that will provide the workforce that is consistent with that.

Senator CARPER. The last question that I have deals with just to follow up on the drop in the value of the dollar. The hearings that we have had in this Committee and other committees that I have participated in suggest there are three major factors driving up the cost of oil. One of those is the laws of supply and demand. Nations are pretty much holding their output level. Demand is rising. There has been—we discussed the drop in the value of the dollar and the effect that that has had. The third factor that we keep coming back to is the role that speculation is playing. We touched on this at least indirectly here today. Just give us some advice. I think we are going to debate, seriously debate, probably before the beginning of next month, legislation dealing with speculation to try to curb the excesses that may be occurring there. If you could give us some advice, it would be timely and much appreciated.

Mr. BERNANKE. Well, as I said, based on the evidence that is available, I would not estimate that speculation or particularly manipulation is a significant part of the rise in oil prices.

That said, the CFTC and others are looking at the data and trying to evaluate that. These are very difficult matters. We do not want to do anything that will stop the futures markets from legitimate functions like providing liquidity and hedging. So, my advice would be to go slow and carefully and to take the insights that you get from the CFTC and others who are associated directly overseeing these activities.

Despite the concerns—and I fully understand the concerns about high gas prices—I don't think it is likely that you can have a big

effect on gas prices with short-term moves in the futures markets. And I would urge careful and deliberate action in this area.

Senator CARPER. All right. Thank you, Mr. Chairman.

Senator Martinez is next, and then followed by Senator Akaka.

Senator MARTINEZ. Thank you, Mr. Chairman.

Mr. Chairman, thank you very much for being with us today. I wanted to focus on a couple of areas. One was your remarks during your testimony regarding the fundamental issue in the energy situation which you identify one of supply and demand, which makes sense to me. I wonder if you might dwell just for a moment on the speculation side as to why you do not see that as a fundamental part of the problem, but then also what we could do to be more helpful in the area of transparency and oversight.

Mr. BERNANKE. Well, there are a number of pieces of evidence against the view that speculation is a primary force. I mentioned in my testimony the absence of hoarding or inventories that you would expect to see if speculation was driving prices above the supply demand equilibrium. There are a number of studies which show that there is little or no connection between the open interest taken by non-commercial traders in futures markets and the subsequent movements in prices.

It is also interesting to note that there are many commodities—or at least some commodities—that are not even traded on futures markets, like iron ore, for example, which have had very large increases in prices. So I think the evidence is fairly weak.

That said, I think that transparency in futures markets, information available to the overseer, the CFTC, is a positive thing. And I expect that the CFTC will come forward with some suggestions in that regard. But I just do not think it is going to be a magic bullet to address this very difficult problem of high oil and commodity prices.

Senator MARTINEZ. In other words, well, it might be helpful and useful to have more transparency ultimately. The supply and demand equilibrium is only going to be impacted by more supply or less demand.

Mr. BERNANKE. I believe that to be true, yes.

Senator MARTINEZ. I want to commend you for the work you have done in consumer protection. I noted in your testimony in a couple of areas that I think are particularly important. I think that it is terrific to prohibit lenders from making higher-priced loans without due regard for a consumer's ability to make the scheduled payments. And I also think it is great to also include the escrowing of property taxes and insurance as an integral part of what we need to do in order to keep homeowners in their home.

And, last, the area of credit cards as well, I think all those are very, very good things for consumers, and particularly at stressful times like this, it is good to have a reckoning of where we are and where we are going and include that in that help to consumers.

I know in the next panel we will talk more about the GSE situation. I want to talk about regulatory reform, if I could. Your predecessor and I had an opportunity to discuss this when I was Secretary of HUD, and I recall also coming before this Committee and testifying with Secretary Snow at that time, proposing a new regu-

latory framework for the GSEs. That was in 2003. I wish we might have done that. But at the same time, we are where we are today.

We do have a piece of legislation moving its way through the Congress, which includes the creation of a new affordable housing trust fund. This affordable housing trust fund is funded by a fee on the GSEs' new business purchases. So, in other words, as they increase their book of business, this fund would grow at a percentage of that.

I wondered if you have a concern, which I certainly have, about this provision. particularly at a time when the GSEs are suffering such substantial losses and when we are, in fact, taking other Government action in order to ensure their sustainability.

Mr. BERNANKE. Senator, I think that is really a congressional prerogative. I really have not gotten into that particular issue. I think the really critical issue, as you alluded to, is that we have a strong and robust regulator that will restore confidence in the markets and will allow Fannie and Freddie to support the mortgage market in the way they are intended to do. That would be my emphasis.

Senator MARTINEZ. Thank you, Mr. Chairman.

Chairman DODD. Thank you, Senator.

Senator Akaka.

Senator AKAKA. Thank you very much, Mr. Chairman. Let me add my welcome to Chairman Bernanke for being here, and my concerns in our country is to educate the people of America as well as to protect them and empower them in our financial system.

Given the recent failures, I am concerned by the increasing lack of trust that individuals have in the banking system. When large numbers of depositors lose trust in their financial institution and demand their money back, the bank can fail as a result, and we know that.

In addition, distrust of the banking system causes many immigrants to miss out on savings, borrowing, and low-cost remittance opportunities found at banks and credit unions.

My question to you is: What must be done to increase trust in the banking system among depositors as well as among the unbanked?

Mr. BERNANKE. Well, Senator, you point to a legitimate question, which is that there are still many people, disproportionately immigrants, who do not have a checking account, do not have a savings account, and these are the "unbanked," as the term goes. In not all but in many cases, those people would be better off with a banking relationship. They might be able to avoid high fees for remittances, for example, or high fees for check cashing if they were associated with a bank. To some extent, it is a cultural element. We encourage banks to reach out to communities, to have people who speak the appropriate language.

On the other side, as you know—and this is one of your important issues that you have been a leader on—is to promote financial literacy and to get folks to understand, how to manage their finances and how important having the right relationships with financial institutions can be.

So I think it is really on both sides. We have to get the banks to reach out. We have to get the public to understand and reach

out. Where necessary, as in the case of home mortgages, disclosures and regulation may be necessary to keep the contracts, clear enough that the public can make use of them. And in that respect, I hope that, for example, our actions on mortgage lending will restore some confidence where there are people who feel that they got burned taking out a subprime mortgage. Perhaps in the future, they will see more clearly what the contract entails, and they will be more confident in taking out a mortgage.

So it is a very important issue, and we can address it, I think, from a number of different directions.

Senator AKAKA. Thank you. Working families, as you know, are having trouble paying for increases today in gasoline, groceries, and other daily living expenses while wages are not increasing fast enough and affordable credit is becoming harder to obtain. I am deeply concerned that too many working families are being exploited by the unscrupulous lenders who give payday loans, and this is where protection, I think, is needed.

I have been impressed by the work of the National Credit Union Administration, NCUA, due to a NCUA grant on the windward side of the island of Oahu in Hawaii at the Community Federal Credit Union at Kailua, and it has developed an affordable alternative to payday loans to help U.S. Marines and other members they serve. We must further encourage the development of these alternatives so that working families have access to affordable small loans.

My question to you is: What must be done to protect consumers from high-cost payday loans and encourage the development of affordable payday loan alternatives?

Mr. BERNANKE. Well, again, I think that competition is the best solution, and I give particular credit to credit unions. They have done some especially good work in terms of providing remittance services to allow people to get money back to their families without exorbitant cost. But I think we should continue to urge banks and other financial institutions to reach out into underserved neighborhoods. That is, in fact, part of the Community Reinvestment Act to try to do that to give people the alternative rather than the storefront in their neighborhood.

So I think that is a desirable goal, and through financial literacy education and working with banks and community development experts, I think we can make progress in that direction, and I would very much like to support that.

Senator AKAKA. Thank you very much for your responses.

Thank you, Mr. Chairman.

Chairman DODD. Thank you very much.

Senator Crapo, you are next, then Senator Bayh, and then I believe we are prepared to move to the additional panel members here. So Senator Crapo.

Senator CRAPO. Thank you very much, Mr. Chairman.

I want to return for just a moment—I know you have gone over this a lot already—to the question of speculation and the issue of prohibiting or aggressively regulating the over-the-counter derivatives. And, you know, I understand that measures to enhance the transparency in our energy markets are a very appropriate response to today's global markets. I am concerned, however, that

overly restrictive limitations on the number of speculative positions that can be held by individuals or other entities could have significant impacts on liquidity in those markets and naturally have the opposite impact that we would intend by those actions, namely, to reduce liquidity and actually drive the price of fuel up or petroleum up.

Could you comment on that?

Mr. BERNANKE. Certainly. First of all, OTC derivatives are not really unregulated in that the dealers and the banks who make these transactions are, of course, regulated in one way or another, and one of the things that the oversight regulators do is make sure that they are taking adequate precautions of a counterparty risk, that they are managing their positions in a safe way.

In general, I think there is some reason to look for more standardization where possible so that we could begin to use particular exchanges as ways of improving liquidity and management of counterparty risk. But I think there is always going to be some scope for over-the-counter products because they are the ones that customize to the particular needs of the other party.

So I think it is important for us to maintain our oversight of the dealers and the banks. We need to continue to work to make sure that the clearing and settlement process works efficiently so there is no confusion or delay. There is some scope for working toward standardization in order to move toward essential counterparties or exchanges. But I think we are always going to have over-the-counter derivatives. They serve a useful function. They help with risk sharing. They provide liquidity to hedgers. And so, I am not advocating any major change in the way we look at those particular instruments other than making sure we clear them and settle them properly.

Senator CRAPO. If you take, say, futures trading in petroleum as an example, isn't it correct that for every transaction, there is a counterparty? In other words, every time there is a buyer, there is also a seller.

Mr. BERNANKE. Yes, of course. With almost no exceptions, speculators in commodities never take delivery. They have to sell their position when it comes due, and so they are not in any way using up the physical resource that underlies the contract. So there has always to be two sides to every transaction.

Senator CRAPO. And the liquidity that we are talking about, am I correct, is primarily being provided for those who are not actual users of petroleum. This liquidity is primarily coming from pension funds. Is that not correct?

Mr. BERNANKE. Well, it depends which side of the transaction you are on. You have people on both sides who are trying to make a bet essentially on whether oil prices will go up or down. But, clearly, one of the major economic functions of futures markets is to allow those who want to lay off their risk, like an airline, the opportunity to sell or to buy forward the fuel so that they will not be subject to the risk of price fluctuations. And it is the activities of speculators in those markets that provides the other side of that transaction and makes those markets liquid and allows them to serve that function.

Senator CRAPO. The airlines are a good example. As you know, a number of the CEOs of a number of airlines have maintained that the price of their jet fuel is being forced unnaturally high because of market speculation in the futures market. Do you believe that they are correct in that?

Mr. BERNANKE. Well, as I have indicated, I think that it is worthwhile making sure that, there is some transparency, that we are doing all we can to make sure these markets are as liquid and as efficient as possible. CFTC has the primary responsibility for that. We are happy to work with them and try to support that.

So I am not saying there cannot be improvements made in these markets, but my best guess, as I have indicated a few times now, is that I do not think that speculative activity per se, or particularly manipulation, is the principal cause of the increases in energy and other commodity prices that we have been seeing.

Senator CRAPO. Thank you.

Chairman DODD. Thank you, Senator, very much.

Senator Bayh.

Senator BAYH. Thank you, Mr. Chairman, and given the nature of our having to leave to vote and then come back, I hope that my questions are not redundant. It is an occupational hazard.

You mentioned that the housing turmoil is sort of the crux of many of the challenges that we are currently facing. Have there been any analogous episodes in other countries previously or in our own that might give some guidance as to—or further guidance as to when this might bottom out?

Mr. BERNANKE. There have been similar episodes in the U.K. and Australia, for example. But it is hard to draw strict analogies. One reason is that the financing systems are different in the different countries. Clearly, in this case, the high loan-to-value subprime adjustable rate mortgages, those sorts of instruments were particularly sensitive to the decline in house prices that we saw, and the effects, therefore, on credit quality and on bank balance sheets were stronger. So there are other examples, and we have looked at those. Most of them suggest, which is something which I am sure we are all happy to hear, that eventually the new equilibriums is established, the housing market comes back into balance, and the negative effects of that are ended, and you begin to see more stable growth again. I am sure that will happen here, but there is not an exact analogy.

Senator BAYH. Well, along those lines—and I know you are reluctant to offer advice to the legislative branch of Government, but I am sure you have followed the bill that passed out of the Senate last week. Going over to the House, there may be some marginal adjustments, but probably not more than that. Is there anything else we should be looking at doing here in a timely fashion to address the housing challenge that has not been included in this legislation?

Mr. BERNANKE. No, I do not think so. Not that I can think of. Again, as this next hearing will reveal, of course, you now have a set of issues and questions to answer relating to the GSEs, and, of course, that fits directly with the elements of the bill that already include a stronger regulator. So I think that is going to be a very, very important issue in the next weeks and months for the——

Senator BAYH. And that is going to raise the topic of borrowing from the discount window, which I would like to ask you about. What currently is the amount that has been let from the window as we gather here today?

Mr. BERNANKE. Well, the loans are short-term loans, and they are rolled over. So I could not give you——

Senator BAYH. We do not know the——

Mr. BERNANKE. Several hundred billion dollars outstanding at any given time. But I——

Senator BAYH. Several hundred billion at a time?

Mr. BERNANKE. At a given time, yes.

Senator BAYH. Is there any limit to the amount that can be utilized through that mechanism, any practical limit? We have the investment banks partaking. If we get the GSEs partaking, I am just wondering how much more there is to be had from that mechanism.

Mr. BERNANKE. I think the Federal Reserve's balance sheet is about $900 billion, and even if we reached that level, which I have no expectation we would, there are other things we could do to address that.

Senator BAYH. I read here recently—I think it was the Economist. I cannot recall the source of the data, but it caught my eye, and I would like your reaction to it. The assertion was by some analysts that of the stimulus checks that had been sent, 90 percent of the amount had been saved. Do you have a reaction to that?

Mr. BERNANKE. I do not know how they would know that. The historical experience, based, for example, on the checks that were sent in 2001, suggests that people spent something on the order of 40 to 50 percent of their check within a few quarters. The relatively strong consumer spending number, as we saw recently, could be due to even a higher propensity to spend out of those checks. So to my way of thinking, so far it seems that they are having an effect, but we will not really know for sure until we see how things play out over the next two quarters.

Senator BAYH. Just two final questions, Mr. Chairman. Chairman Dodd asked you about the prospects of a second stimulus package moving through. My question is: If we are really looking at trying to buttress the consumer at this fragile time, doesn't income and wealth level, don't those affect the marginal propensity to consume? Is that an accurate statement?

Mr. BERNANKE. That is generally thought to be the case.

Senator BAYH. And should that not lead us to focus on those who are more likely to consumer, you know, the more middle-class, lower-middle-class level, if propping up the consumer is our aim?

Mr. BERNANKE. As I said when we were discussing the first stimulus package, one of the criteria was to be targeted, which means to go to people who would be more likely to spend in the short term, and, generally speaking though it is not uniform, there tends to be a higher spending propensity from people of lower income and lower wealth

Senator BAYH. My final question here as my time expires: There has been a recent increase in the price of credit default swaps on U.S. Treasurys. What do you think accounts for that? And should

that be a matter of some concern in the message the market seems to be sending about their confidence?

Mr. BERNANKE. There has been a lot of movement in a variety of spreads, for example, the spreads between newly issued and previously issued bonds and so on. I would not read too much into that. It is a very small change. I think it has more to do with liquidity in markets and other risk aversion—other types of behavior rather than any sense that there is a default risk. That would be my guess.

Senator BAYH. Thank you, Mr. Chairman.

Chairman DODD. Thank you very much, Senator.

We have one additional question from Senator Schumer.

Senator SCHUMER. Thank you, Mr. Chairman, and thank you for being here. I had two.

One is not about the Fannie and Freddie rescue per se, but just about the criteria. There is tremendous focus on the stock price, which we all know has sunk a great deal. But it seems to me that of much greater importance to the economy and to the markets and even to the stability of Fannie and Freddie is the differential that Fannie and Freddie have to pay for their bonds and, say, the U.S. Government has to pay for Treasury's. Do you agree with that, and could you give us some indication of how the bond spread is going? And how does it measures in terms of Fannie and Freddie's stability?

Mr. BERNANKE. Well, that bond spread opened up last week. It has generally come in since Paulson announced these actions. I think that is very important, both because Fannie and Freddie obligations, both MBS and corporate debt, are held all over the world, including large amounts by banks, so that is very important. And, second, that determines their marginal cost of finance for mortgages, which ultimately we want to make sure that mortgages are available at a reasonable price.

So the announcements have been generally good for the debt because of the sense that the Government is going to become involved in these agencies. The stock prices are also important because they affect the ability of Fannie and Freddie to raise capital. And I think at this point, there is probably a lot of uncertainty for shareholders as to exactly what is going to happen and to what extent that will affect the value of their shares.

Senator SCHUMER. One final question. There has been a lot of talk now about somehow limiting short selling, particularly in financial companies, because of all the problems. Now, a while ago we had something called the uptick rule, which provided some measure of restraint on short sellers. When we changed from selling stocks from eighths to hundredths, an uptick of one one-hundredth does not mean much. But I have heard some ideas recently—I have been toying with it—of recommending that we go back to the uptick rule and say you don't need a one one-hundredth uptick, but you need 12 upticks, and you get back to the one-eighth.

Do you have any thoughts, preliminary thoughts, on whether that would be a good idea and, in general, your view on short selling as it affects the markets here?

Mr. BERNANKE. Well, I think you do not want to rule out short selling as a general matter. That is a way for markets to be efficient and for people to take a view on where a stock price ought to be. There are already limits on so-called naked shorts without owning the stock, and certainly we want to be very careful about situations in which a potential short seller spreads unverified rumors and so on.

I think I am in an excellent position here to answer your question because Chairman Cox is going to be sitting next to me in a few minutes, and I think he could give you a much better sense of where they are at the SEC on this issue. But my short answer is that some limits on short selling are probably appropriate, but we want to make sure that legitimate short selling remains part of the market.

Senator SCHUMER. I agree with both.

Thank you, Mr. Chairman.

Chairman DODD. Thank you very much, Senator, and with that, we are going to take a couple minutes' break, give the Chairman an opportunity to take a few minutes, and we will invite Secretary Paulson and Chairman Cox to come into the room, and we will begin the second phase of this hearing. So we will take about 5 minutes here.

[Whereupon, at 12:09 p.m., the hearing was adjourned.]

[Prepared statements, response to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF BEN S. BERNANKE

CHAIRMAN,

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

JULY 15, 2008

Chairman Dodd, Senator Shelby, and Members of the Committee, I am pleased to present the Federal Reserve's Monetary Policy Report to the Congress.

The U.S. economy and financial system have confronted some significant challenges thus far in 2008. The contraction in housing activity that began in 2006 and the associated deterioration in mortgage markets that became evident last year have led to sizable losses at financial institutions and a sharp tightening in overall credit conditions. The effects of the housing contraction and of the financial headwinds on spending and economic activity have been compounded by rapid increases in the prices of energy and other commodities, which have sapped household purchasing power even as they have boosted inflation. Against this backdrop, economic activity has advanced at a sluggish pace during the first half of this year, while inflation has remained elevated.

Following a significant reduction in its policy rate over the second half of 2007, the Federal Open Market Committee (FOMC) eased policy considerably further through the spring to counter actual and expected weakness in economic growth and to mitigate downside risks to economic activity. In addition, the Federal Reserve expanded some of the special liquidity programs that were established last year and implemented additional facilities to support the functioning of financial markets and foster financial stability. Although these policy actions have had positive effects, the economy continues to face numerous difficulties, including ongoing strains in financial markets, declining house prices, a softening labor market, and rising prices of oil, food, and some other commodities. Let me now turn to a more detailed discussion of some of these key issues.

Developments in financial markets and their implications for the macroeconomic outlook have been a focus of monetary policymakers over the past year. In the second half of 2007, the deteriorating performance of subprime mortgages in the United States triggered turbulence in domestic and international financial markets as investors became markedly less willing to bear credit risks of any type. In the first quarter of 2008, reports of further losses and write-downs at financial institutions intensified investor concerns and resulted in further sharp reductions in market liquidity. By March, many dealers and other institutions, even those that had relied heavily on short-term secured financing, were facing much more stringent borrowing conditions.

In mid-March, a major investment bank, The Bear Stearns Companies, Inc., was pushed to the brink of failure after suddenly losing access to short-term financing markets. The Federal Reserve judged that a disorderly failure of Bear Stearns would pose a serious threat to overall financial stability and would most likely have significant adverse implications for the U.S. economy. After discussions with the Securities and Exchange Commission and in consultation with the Treasury, we invoked emergency authorities to provide special financing to facilitate the acquisition of Bear Stearns by JPMorgan Chase & Co. In addition, the Federal Reserve used emergency authorities to establish two new facilities to provide backstop liquidity to primary dealers, with the goals of stabilizing financial conditions and increasing the availability of credit to the broader economy.[1] We have also taken additional steps to address liquidity pressures in the banking system, including a further easing of the terms for bank borrowing at the discount window and increases in the amount of credit made available to banks through the Term Auction Facility. The FOMC also authorized expansions of its currency swap arrangements with the European Central Bank and the Swiss National Bank to facilitate increased dollar lending by those institutions to banks in their jurisdictions.

These steps to address liquidity pressures coupled with monetary easing seem to have been helpful in mitigating some market strains. During the second quarter, credit spreads generally narrowed, liquidity pressures ebbed, and a number of financial institutions raised new capital. However, as events in recent weeks have demonstrated, many financial markets and institutions remain under considerable stress, in part because the outlook for the economy, and thus for credit quality, remains uncertain. In recent days, investors became particularly concerned about the financial condition of the government-sponsored enterprises (GSEs), Fannie Mae

[1] Primary dealers are financial institutions that trade in U.S. government securities with the Federal Reserve Bank of New York. On behalf of the Federal Reserve System, the New York Fed's Open Market Desk engages in the trades to implement monetary policy.

and Freddie Mac. In view of this development, and given the importance of these firms to the mortgage market, the Treasury announced a legislative proposal to bolster their capital, access to liquidity, and regulatory oversight. As a supplement to the Treasury's existing authority to lend to the GSEs and as a bridge to the time when the Congress decides how to proceed on these matters, the Board of Governors authorized the Federal Reserve Bank of New York to lend to Fannie Mae and Freddie Mac, should that become necessary. Any lending would be collateralized by U.S. government and Federal agency securities. In general, healthy economic growth depends on well-functioning financial markets. Consequently, helping the financial markets to return to more normal functioning will continue to be a top priority of the Federal Reserve.

I turn now to current economic developments and prospects. The economy has continued to expand, but at a subdued pace. In the labor market, private payroll employment has declined this year, falling at an average pace of 94,000 jobs per month through June. Employment in the construction and manufacturing sectors has been particularly hard hit, although employment declines in a number of other sectors are evident as well. The unemployment rate has risen and now stands at 5½ percent.

In the housing sector, activity continues to weaken. Although sales of existing homes have been about unchanged this year, sales of new homes have continued to fall, and inventories of unsold new homes remain high. In response, homebuilders continue to scale back the pace of housing starts. Home prices are falling, particularly in regions that experienced the largest price increases earlier this decade. The declines in home prices have contributed to the rising tide of foreclosures; by adding to the stock of vacant homes for sale, these foreclosures have, in turn, intensified the downward pressure on home prices in some areas.

Personal consumption expenditures have advanced at a modest pace so far this year, generally holding up somewhat better than might have been expected given the array of forces weighing on household finances and attitudes. In particular, with the labor market softening and consumer price inflation elevated, real earnings have been stagnant so far this year; declining values of equities and houses have taken their toll on household balance sheets; credit conditions have tightened; and indicators of consumer sentiment have fallen sharply. More positively, the fiscal stimulus package is providing some timely support to household incomes. Overall, consumption spending seems likely to be restrained over coming quarters.

In the business sector, real outlays for equipment and software were about flat in the first quarter of the year, and construction of nonresidential structures slowed appreciably. In the second quarter, the available data suggest that business fixed investment appears to have expanded moderately. Nevertheless, surveys of capital spending plans indicate that firms remain concerned about the economic and financial environment, including sharply rising costs of inputs and indications of tightening credit, and they are likely to be cautious with spending in the second half of the year. However, strong export growth continues to be a significant boon to many U.S. companies.

In conjunction with the June FOMC meeting, Board members and Reserve Bank presidents prepared economic projections covering the years 2008 through 2010. On balance, most FOMC participants expected that, over the remainder of this year, output would expand at a pace appreciably below its trend rate, primarily because of continued weakness in housing markets, elevated energy prices, and tight credit conditions. Growth is projected to pick up gradually over the next 2 years as residential construction bottoms out and begins a slow recovery and as credit conditions gradually improve. However, FOMC participants indicated that considerable uncertainty surrounded their outlook for economic growth and viewed the risks to their forecasts as skewed to the downside.

Inflation has remained high, running at nearly a 3½ percent annual rate over the first 5 months of this year as measured by the price index for personal consumption expenditures. And, with gasoline and other consumer energy prices rising in recent weeks, inflation seems likely to move temporarily higher in the near term.

The elevated level of overall consumer inflation largely reflects a continued sharp run-up in the prices of many commodities, especially oil but also certain crops and metals.[2] The spot price of West Texas intermediate crude oil soared about 60 percent in 2007 and, thus far this year, has climbed an additional 50 percent or so. The price of oil currently stands at about five times its level toward the beginning

[2] The dominant role of commodity prices in driving the recent increase in inflation can be seen by contrasting the overall inflation rate with the so-called core measure of inflation, which excludes food and energy prices. Core inflation has been fairly steady this year at an annual rate of about 2 percent.

of this decade. Our best judgment is that this surge in prices has been driven predominantly by strong growth in underlying demand and tight supply conditions in global oil markets. Over the past several years, the world economy has expanded at its fastest pace in decades, leading to substantial increases in the demand for oil. Moreover, growth has been concentrated in developing and emerging market economies, where energy consumption has been further stimulated by rapid industrialization and by government subsidies that hold down the price of energy faced by ultimate users.

On the supply side, despite sharp increases in prices, the production of oil has risen only slightly in the past few years. Much of the subdued supply response reflects inadequate investment and production shortfalls in politically volatile regions where large portions of the world's oil reserves are located. Additionally, many governments have been tightening their control over oil resources, impeding foreign investment and hindering efforts to boost capacity and production. Finally, sustainable rates of production in some of the more secure and accessible oil fields, such as those in the North Sea, have been declining. In view of these factors, estimates of long-term oil supplies have been marked down in recent months. Longdated oil futures prices have risen along with spot prices, suggesting that market participants also see oil supply conditions remaining tight for years to come.

The decline in the foreign exchange value of the dollar has also contributed somewhat to the increase in oil prices. The precise size of this effect is difficult to ascertain, as the causal relationships between oil prices and the dollar are complex and run in both directions. However, the price of oil has risen significantly in terms of all major currencies, suggesting that factors other than the dollar, notably shifts in the underlying global demand for and supply of oil, have been the principal drivers of the increase in prices.

Another concern that has been raised is that financial speculation has added markedly to upward pressures on oil prices. Certainly, investor interest in oil and other commodities has increased substantially of late. However, if financial speculation were pushing oil prices above the levels consistent with the fundamentals of supply and demand, we would expect inventories of crude oil and petroleum products to increase as supply rose and demand fell. But in fact, available data on oil inventories show notable declines over the past year. This is not to say that useful steps could not be taken to improve the transparency and functioning of futures markets, only that such steps are unlikely to substantially affect the prices of oil or other commodities in the longer term.

Although the inflationary effect of rising oil and agricultural commodity prices is evident in the retail prices of energy and food, the extent to which the high prices of oil and other raw materials have been passed through to the prices of non-energy, non-food finished goods and services seems thus far to have been limited. But with businesses facing persistently higher input prices, they may attempt to pass through such costs into prices of final goods and services more aggressively than they have so far. Moreover, as the foreign exchange value of the dollar has declined, rises in import prices have put greater upward pressure on business costs and consumer prices. In their economic projections for the June FOMC meeting, monetary policymakers marked up their forecasts for inflation during 2008 as a whole. FOMC participants continue to expect inflation to moderate in 2009 and 2010, as slower global growth leads to a cooling of commodity markets, as pressures on resource utilization decline, and as longer-term inflation expectations remain reasonably well anchored. However, in light of the persistent escalation of commodity prices in recent quarters, FOMC participants viewed the inflation outlook as unusually uncertain and cited the possibility that commodity prices will continue to rise as an important risk to the inflation forecast. Moreover, the currently high level of inflation, if sustained, might lead the public to revise up its expectations for longer-term inflation. If that were to occur, and those revised expectations were to become embedded in the domestic wage- and price-setting process, we could see an unwelcome rise in actual inflation over the longer term. A critical responsibility of monetary policymakers is to prevent that process from taking hold.

At present, accurately assessing and appropriately balancing the risks to the outlook for growth and inflation is a significant challenge for monetary policymakers. The possibility of higher energy prices, tighter credit conditions, and a still-deeper contraction in housing markets all represent significant downside risks to the outlook for growth. At the same time, upside risks to the inflation outlook have intensified lately, as the rising prices of energy and some other commodities have led to a sharp pickup in inflation and some measures of inflation expectations have moved higher. Given the high degree of uncertainty, monetary policymakers will need to carefully assess incoming information bearing on the outlook for both inflation and growth. In light of the increase in upside inflation risk, we must be particularly

alert to any indications, such as an erosion of longer-term inflation expectations, that the inflationary impulses from commodity prices are becoming embedded in the domestic wage- and price-setting process.

I would like to conclude my remarks by providing a brief update on some of the Federal Reserve's actions in the area of consumer protection. At the time of our report last February, I described the Board's proposal to adopt comprehensive new regulations to prohibit unfair or deceptive practices in the mortgage market, using our authority under the Home Ownership and Equity Protection Act of 1994. After reviewing the more than 4,500 comment letters we received on the proposed rules, the Board approved the final rules yesterday.

The new rules apply to all types of mortgage lenders and will establish lending standards aimed at curbing abuses while preserving responsible subprime lending and sustainable homeownership. The final rules prohibit lenders from making higher-priced loans without due regard for consumers' ability to make the scheduled payments and require lenders to verify the income and assets on which they rely when making the credit decision. Also, for higher-priced loans, lenders now will be required to establish escrow accounts so that property taxes and insurance costs will be included in consumers' regular monthly payments. The final rules also prohibit prepayment penalties for higher-priced loans in cases in which the consumer's payment can increase during the first few years and restrict prepayment penalties on other higher-priced loans Other measures address the coercion of appraisers, servicer practices, and other issues. We believe the new rules will help to restore confidence in the mortgage market.

In May, working jointly with the Office of Thrift Supervision and the National Credit Union Administration, the Board issued proposed rules under the Federal Trade Commission Act to address unfair or deceptive practices for credit card accounts and overdraft protection plans. Credit cards provide a convenient source of credit for many consumers, but the terms of credit card loans have become more complex, which has reduced transparency. Our consumer testing has persuaded us that disclosures alone cannot solve this problem. Thus, the Board's proposed rules would require card issuers to alter their practices in ways that will allow consumers to better understand how their own decisions and actions will affect their costs. Card issuers would be prohibited from increasing interest rates retroactively to cover prior purchases except under very limited circumstances. For accounts having multiple interest rates, when consumers seek to pay down their balance by paying more than the minimum, card issuers would be prohibited from maximizing interest charges by applying excess payments to the lowest rate balance first. The proposed rules dealing with bank overdraft services seek to give consumers greater control by ensuring that they have ample opportunity to opt out of automatic payments of overdrafts. The Board has already received more than 20,000 comment letters in response to the proposed rules.

Thank you. I would be pleased to take your questions.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SHELBY FROM BEN S. BERNANKE

Q.1. Inflation: Mr. Chairman, I have great concerns about inflation. Inflation degrades consumer's purchasing power and reduces the value of many investments, including people's homes. Additionally, continued food and energy price increases can have negative effects on consumer confidence and potentially unhinge inflation expectations.

How large of a shift in expectations would the FOMC have to see before it began to tighten the target for the Federal Funds rate?

Please comment on whether you have observed a pass-through of higher input prices for commodities and energy in the form of higher prices for finished goods?

A.1. The inflationary effects of the sharp increases in oil and agricultural commodity prices earlier this year are clearly evident in the retail prices of energy and food. In particular, the PCE price index for food and beverages increased almost 6 percent over the 12 months ending in August 2008, while the PCE price index for energy moved up 28 percent over that same period. The acceleration in the price indexes for these two components of spending accounted for much of the pickup in the 12-month change in the overall PCE price index to 4.5 percent in August 2008 from 2 percent over the 12 months ending in August 2007.

It appears that, to some extent, the earlier increases in the prices of oil and other raw materials have been passed through to the prices of non-energy, non-food finished goods and services. Prices for consumer items that have a high energy content—such as airfares and other transportation services, housekeeping supplies, and household operations—have moved up noticeably this year; moreover, energy and other basic input costs could well have pushed up prices for a range of other items for which the direct effect of commodity prices is more difficult to identify. In the aggregate, the PCE price index excluding food and energy rose at an annual rate of 2.6 percent over the 12 months ending in August 2008, about one-half percentage point faster than over the 12 months ending in August 2007.

Thus far, however, we have not seen the sort of run up in labor compensation and inflation expectations that could lead to a deterioration in the longer term outlook for inflation. In particular, although some indicators of inflation expectations have increased, long-term inflation expectations still appear to be reasonably well anchored. Indeed, given the recent sharp declines in the prices for crude oil and other commodities and the weakening in economic conditions, the FOMC believes that inflation is likely to moderate later this year and in 2009. Of course, the Committee will continue to monitor the incoming information on inflation and inflation expectations carefully.

Q.2. Update on Bear Stearns: Chairman Bernanke, the Federal Reserve created a limited liability corporation (Maiden Lane LLC) to acquire and manage certain assets from Bear Stearns, with the goal of maximizing repayment of the original loan back to the Federal Reserve Bank of New York. We all hope that this loan will be repaid in its entirety through the sale of these assets over time.

How has the value of the Bear Stearns portfolio changed over time?

In the few months since this transaction occurred, has anything changed that would lead to a reassessment of potential losses?

A.2. As indicated in the Federal Reserve's weekly H.4.1 statistical releases, the fair value of the net portfolio holdings of Maiden Lane LLC was $29.816 billion as of March 14, 2008, $28.893 billion as of June 26, 2008, and $29.018 billion as of June 30, 2008. The Federal Reserve will publish in the H.4.1 statistical release an updated fair value of the net portfolio holdings of Maiden Lane LLC as of the end of each calendar quarter. The fair value of the net portfolio holdings of Maiden Lane LLC was $26.979 billion as of November 26, 2008, which reflects valuations as of September 30, 2008.

As more fully explained in my testimony before the Committee on April 3, 2008, the Federal Reserve decided to finance a portion of Bear Stearns' assets to facilitate the acquisition of the firm by JPMorgan Chase to address the severe consequences that likely would have resulted from a disorderly liquidation of the firm in the unusually fragile circumstances that then prevailed. In taking this action, the Federal Reserve consulted closely with the Treasury Department.

In order to maximize the returns to the Federal Reserve and the taxpayer, the Federal Reserve has engaged an independent portfolio management firm to professionally manage the assets held by Maiden Lane LLC. The assets will be managed with a long-term time horizon of at least 10 years. Although the value of the portfolio declined between March 14, 2008, and June 30, 2008, given the long-term time horizon for the portfolio it is too early to estimate what, if any, net losses might result from the eventual liquidation of the portfolio. Importantly, as previously announced, JPMorgan Chase will bear the first $1 billion of any losses on the collateral pool.

Q.3. Negative Real Interest Rates: Chairman Bernanke, real interest rates appear to be negative at present, since the nominal short-term rate is lower than inflation.

Does having a negative real rate of interest during a period of increased inflation harm the Fed's ability to work towards maintaining price stability?

For how long can the Fed run a negative real interest rate before inflation pressures grow to dangerous levels?

A.3. The FOMC has judged the current level of short-term interest rates as appropriate in light of its statutory objectives of maximum employment and price stability. Relatively low real short-term interest rates are currently necessary to counter the adverse effects of the broad range of factors restraining aggregate spending and output. Such factors include severe strains on financial markets and institutions, tight credit conditions, the ongoing housing correction, and elevated energy prices, which reduce households' discretionary income. As such, we do not believe that the current low level of real short-term interest rates is likely to have an adverse effect on the economy. Clearly, the highly accommodative stance of monetary policy cannot be maintained indefinitely. But, in view of the expectation for inflation to decline, such a stance is appropriate

for a time to help foster moderate economic growth in the face of the range of factors that is restraining growth. The Committee believes that inflation is likely to moderate later this year and during 2009 as the effect of recent sharp drops in the prices of energy and other commodity prices shows through to broad price indexes and as slack in the economy resulting from slower economic growth reduces pressure on resources.

Q.4. FOMC Statement Bias: Mr. Chairman, in the FOMC's most recent statement, the Committee seemed to shift its bias away from concerns over slower growth, towards concern about inflation and inflation expectations.

Would you elaborate on what this shift means for future policy decisions?

Additionally, how long would inflation rates have to stay elevated for the Committee to display unambiguous bias towards alleviating inflation concerns?

A.4. In conducting monetary policy, the Committee carefully monitors ongoing developments in the economy and financial markets that influence the outlook for the economy and inflation. From time to time, the Federal Reserve adjusts its policy stance in view of the evolving economic outlook and risks to the outlook. After each meeting, the Committee issues a statement that explains any adjustment to its policy stance and characterizes the outlook for economic growth and inflation. In the period before the June meeting, incoming economic data had indicated that economic growth in the second quarter was stronger than had been expected. Also, financial market conditions appeared to have improved somewhat, although markets clearly remained under stress. Meanwhile, oil prices had increased further. In these circumstances, the Committee judged at its June meeting that the downside risks to growth diminished and the upside risks to inflation had increased.

An important uncertainty in the outlook for inflation is whether the current elevated level of total inflation may lead to upward pressure on longer-term inflation expectations. At present, although some indicators of inflation expectations have increased, long-term inflation expectations still appear to be reasonably well anchored. However, the Committee is monitoring inflation and inflation expectations very carefully.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR BUNNING FROM BEN S. BERNANKE

Q.1. The number and severity of credit rating downgrades from credit rating agencies in the last year casts doubt on the reliability of such ratings. What is the Fed doing to verify the credit rating of the collateral you are accepting at the various Fed facilities?

A.1. The Federal Reserve regularly updates the credit ratings of assets pledged as collateral and uses multiple ratings rather than just one. Assets are regularly marked to market and haircuts are applied to provide adequate protection against market, liquidity, and credit risks. In cases where ratings are less reliable, we require a higher rating than we would otherwise. It should be noted that the entire pool of collateral pledged by a depository institution

secures any loans to that institution; moreover, the Federal Reserve has recourse to the borrower under all of its lending facilities beyond the specific collateral pledged.

Although credit ratings are one determinant of the eligibility of collateral pledged to Federal Reserve liquidity facilities, Reserve Banks also perform independent credit analysis when receiving collateral and especially when extending a loan to a depository institution. That analysis is based on publicly available information as well as on supervisory information on both the quality of the collateral and on the financial condition of the pledging institution.

Q.2. In 2006, Congress passed the Credit Rating Agency Reform Act, which created a formal process for recognizing and examining credit rating agencies with a goal of increasing competition and rating quality. Under that law, the SEC has now recognized 10 National Recognized Statistical Rating Organizations. However, the Fed only accepts credit ratings from the three largest rating agencies for collateral taken at the various Fed facilities. Why does the Fed not accept ratings from the other approved agencies? Are there any plans to revisit that prohibition?

A.2. The Federal Reserve accepts a very large volume of collateral, and it is critically important to be able to access credit ratings and other information on a timely basis in a fully automated fashion. The Federal Reserve is open to utilizing credit ratings of all NRSROs consistent with this basic requirement.

Q.3. Given the concerns about the government-sponsored entities that led the Fed to grant them access to a lending facility and the Treasury Department to ask for rescue legislation, has the Fed changed its practices on accepting GSE-backed securities as collateral at the Fed facilities? Have you increased the collateral required when GSE-backed collateral is posted?

A.3. Securities issued or guaranteed by the GSEs remain eligible collateral at the Federal Reserve's various liquidity support facilities. The market prices of GSE securities pledged as collateral are regularly updated and the haircuts are determined to provide the Federal Reserve with adequate protection against market, liquidity, and credit risk. The haircuts applied to collateral pledged by depository institutions to the discount window are regularly recalibrated by the Federal Reserve, and it has not been necessary to change those applied to GSE-related securities. Haircuts applied to securities pledged by primary dealers for repurchase agreements, the primary dealer credit facility, and the term securities lending facility are chosen to be consistent with, but slightly more conservative than, market practice.

For use at 10:00 a.m., EDT
Tuesday
July 15, 2008

Monetary Policy Report to the Congress

July 15, 2008

Board of Governors of the Federal Reserve System

Monetary Policy Report to the Congress

Submitted pursuant to section 2B of the Federal Reserve Act

July 15, 2008

Board of Governors of the Federal Reserve System

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

Washington, D.C., July 15, 2008

THE PRESIDENT OF THE SENATE
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES

The Board of Governors is pleased to submit its *Monetary Policy Report to the Congress* pursuant to section 2B of the Federal Reserve Act.

Sincerely,

Ben Bernanke, Chairman

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Part 1
Overview: Monetary Policy and the Economic Outlook

The U.S. economy remained sluggish in the first half of 2008, and steep increases in commodity prices boosted consumer price inflation. The housing market continued to contract, weighing on overall economic activity. Against a backdrop of mounting losses incurred by major financial institutions, financial market conditions deteriorated sharply further toward the end of the first quarter—a development that threatened to severely impair the functioning of the overall financial system and to hinder economic growth. In response, the Federal Reserve undertook a number of significant actions to address liquidity pressures faced by banks and other financial institutions, thereby augmenting the liquidity-enhancing measures implemented in the second half of 2007. Taken together, these measures fostered some improvement in the functioning of financial markets, but considerable strains persist. In view of the implications of the substantial reduction in credit availability and the continuing decline in housing activity for the economic outlook, the Federal Open Market Committee (FOMC) further eased the stance of monetary policy. After cutting the target federal funds rate 100 basis points in the second half of 2007, the FOMC reduced rates another 225 basis points over the first four months of 2008. The further easing of policy was seen as consistent with fostering price stability over time, given the Committee's expectation that a flattening-out of energy prices and increasing economic slack would damp inflationary pressures.

The most recent economic projections of participants in FOMC meetings (Board members and Reserve Bank presidents) are presented in part 4 of this report. According to these projections, the economy is expected to expand slowly over the rest of this year. FOMC participants anticipate a gradual strengthening of economic growth over coming quarters as the lagged effects of past monetary policy actions, amid gradually improving financial market conditions, begin to provide additional lift to spending and as housing activity begins to stabilize. FOMC participants marked up their forecasts of inflation for 2008 as a whole, reflecting the upward pressure on inflation from rising commodity prices. However, with longer-run inflation expectations anticipated to remain reasonably well anchored, with futures markets indicating that commodity prices are expected to flatten out, and with pressures on resources likely to ease, inflation is projected to moderate appreciably in 2009. FOMC participants indicate that considerable uncertainty surrounds the outlook for economic growth and that they see the risks around that outlook as skewed to the downside. They also see prospects for inflation as unusually uncertain, and they view the risks surrounding their forecasts for inflation as skewed to the upside.

In the second half of 2007, the deteriorating performance of subprime mortgages in the United States triggered a reassessment of credit and liquidity risks across a broad range of assets, leading to widespread strains and turbulence in domestic and international financial markets. During the first quarter of 2008, reports of further losses and write-downs at major financial institutions intensified concerns about credit and liquidity risks and resulted in a further sharp reduction of market liquidity. Risk spreads—particularly for structured credit products—widened dramatically, and securitization activity all but shut down in a number of markets. By March, many securities dealers and other institutions that had relied heavily on short-term financing in markets for repurchase agreements were facing much more stringent borrowing conditions.

In mid-March, a major investment bank, The Bear Stearns Companies, Inc., was pushed to the brink of failure after suddenly losing access to short-term financing markets. The Federal Reserve judged that a disorderly failure of Bear Stearns would have threatened overall financial stability and would most likely have had significant adverse implications for the U.S. economy. After discussions with the Securities and Exchange Commission and in consultation with the Treasury, the Federal Reserve determined that it should invoke emergency authorities to provide special financing to facilitate the acquisition of Bear Stearns by JPMorgan Chase & Co. The Federal Reserve also used emergency authorities to establish the Term Securities Lending Facility and the Primary Dealer Credit Facility to support the liquidity of primary dealers and financial

markets more generally, which would bolster the availability of credit to the overall economy.[1] (See the box entitled "The Federal Reserve's Liquidity Operations" in part 2, page 26.) Other steps taken by the Federal Reserve in recent months to address strains in financial markets include a further easing in the terms for bank borrowing at the discount window and an increase in the amount of credit made available to banks through the Term Auction Facility. The FOMC also authorized increases in its currency swap arrangements with the European Central Bank and the Swiss National Bank to facilitate an expansion of dollar lending operations to banks in their jurisdictions.

Over the second quarter, financial market conditions improved somewhat—credit spreads generally narrowed, liquidity pressures ebbed, and financial institutions made progress in raising new capital. Still, asset prices continue to be volatile, and many financial markets and institutions remain under considerable stress. Very recently, the share prices of Fannie Mae and Freddie Mac dropped sharply on investor concerns about their financial condition and capital position. The Treasury announced a legislative initiative to bolster the capital, access to liquidity, and regulatory oversight of the government-sponsored enterprises (GSEs). As a supplement to the Treasury's existing authority to lend to the GSEs, the Board of Governors established a temporary arrangement that allows the Federal Reserve to extend credit to Fannie Mae and Freddie Mac, if necessary.

The sluggish pace of economic activity in the first half of 2008 was accompanied by a further deterioration in the labor market. Private-sector payroll employment declined at an average monthly pace of 94,000, and the unemployment rate rose to 5½ percent. Moreover, real labor income appears to have been flat in the first half of the year. Although wages rose in nominal terms, the purchasing power of those nominal gains was eroded by the rapid increases in consumer prices. Declining employment, stagnant real wages, and lower equity and home values weighed on consumer sentiment and spending. In addition, amid falling house prices and rising foreclosures, activity in the housing sector continued to decrease. The resulting softness in business sales and profits also made the environment for capital spending less hospitable. The weakness in overall domestic demand was partly offset by strong growth of exports, which were supported by a sustained expansion of foreign activity and a lower dollar.

The substantial further rise this year in the prices of many commodities, especially oil and agricultural products, largely reflected strong growth of physical demand that outstripped supply in these markets. Although weakening economic activity and rising prices have tempered demand for commodities in many industrialized nations, demand has continued to grow in booming emerging market economies. However, supplies of commodities have generally not kept pace for a variety of reasons, including political tensions in some oil-producing nations, higher input costs, lags in the development of new capacity, and more recently, floods in the Midwest. To varying degrees, the resulting increases in materials prices have passed through into retail prices of energy, food, and some other items.

Overall consumer price inflation, as measured by the price index for personal consumption expenditures, remained elevated in the first half of 2008, largely because of the sharp increases in the prices of many commodities. The decline in the foreign exchange value of the dollar has boosted import prices more generally and thus has also put upward pressure on inflation. Nonetheless, increases in labor costs and core consumer prices (which exclude the direct effects of movements in energy and food prices) have remained moderate. The rapid advance in overall prices has boosted some measures of inflation expectations: Near-term inflation expectations have risen considerably in recent months, and some indicators of longer-term inflation expectations have also moved up—a development that will require close monitoring in the period ahead.

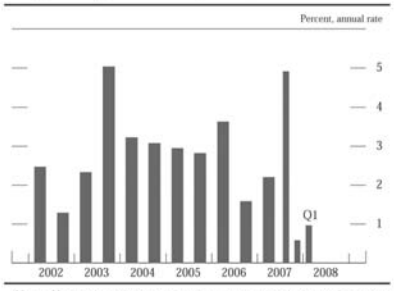
1. Primary dealers are firms that trade in U.S. government securities with the Federal Reserve Bank of New York. On behalf of the Federal Reserve System, the New York Fed's Open Market Desk engages in such trades to implement monetary policy.

Part 2
Recent Economic and Financial Developments

The growth of economic activity, which slowed sharply in the fourth quarter of 2007, remained subpar in the first half of 2008. Although the restraint on activity late in 2007 was concentrated in the housing sector, spillovers to other areas of the economy began to show through more clearly in the first half of 2008. Meanwhile, consumer price inflation has remained elevated this year, primarily because of steep increases in the prices of many commodities. Probably in response to the sizable rise in headline price indexes, some indicators of longer-term inflation expectations have risen in recent months. However, increases in labor costs and core prices have been fairly stable, reflecting in part the softening in aggregate activity.

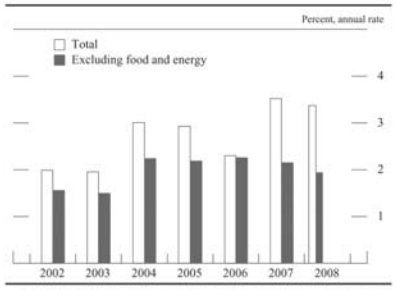
Financial market stress that had developed over the second half of last year intensified in the first quarter of this year. Increased concerns about the possibility of a global economic slowdown and a generalized flight from riskier assets contributed to sharply wider risk spreads, heightened volatility, and impaired liquidity across a range of markets. The Federal Reserve responded to these developments and their potential adverse implications for the economy by aggressively easing the stance of monetary policy and by taking a number of steps to bolster liquidity and enhance market functioning. Conditions in financial markets improved somewhat in the wake of these actions, but significant strains remain. With credit conditions tight, equity and home values falling, and rapidly rising commodity prices boosting costs and consumer prices, growth of household and business spending appears to have been sluggish over the first half of the year.

Change in real gross domestic product, 2002–08



NOTE: Here and in subsequent figures, except as noted, change for a given period is measured to its final quarter from the final quarter of the preceding period.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Change in the chain-type price index for personal consumption expenditures, 2002–08



NOTE: Through 2007, change is from December to December; for 2008, change is from December to May.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

The Household Sector

Residential Investment and Finance

Housing demand, residential construction, and home prices have all continued to fall so far this year. Following a decline at an annual rate of 43 percent in the second half of 2007, sales of new homes decreased at an annual rate of 32 percent in the first five months of 2008. However, sales of single-family existing homes, which dropped at an annual rate of 26 percent in the second half of last year, have been about unchanged this year. Moreover, pending home sales, which provide a glimpse of the pace of existing home sales in the months ahead, on net leveled out in the spring, hinting at some stabilization in transactions in the resale market. Still, for the overall housing sector, the challenging mortgage lending environment and the concerns of

prospective homebuyers about further declines in house prices are likely continuing to depress housing demand.

As new home sales have continued to decline, homebuilders have struggled to work down their substantial overhang of unsold houses. As a consequence, residential construction activity has been pared further this year. In the single-family housing sector, new units were started at an annual rate of 674,000 in May—down more than 13 percent this year and roughly 60 percent since the peak reached in the first quarter of 2006. Despite these deep production cuts, the stock of unsold homes has moved down only 20 percent from its record high in early 2006. When evaluated relative to the three-month average pace of sales, the months' supply of unsold new homes has continued to rise and stood at 10½ months in May. In the multifamily sector, starts averaged an annual rate of about 320,000 units during the first five months of 2008, a level of activity at the lower end of its range in the past several years. All told, the decline in residential investment trimmed the growth rate of real gross domestic product (GDP) about 1 percentage point in the first quarter of 2008 and appears to have held down the second-quarter growth rate by about the same amount.

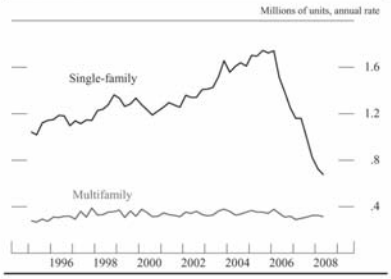
House prices also have continued to fall. The monthly price index published by the Office of Federal Housing Enterprise Oversight dropped at a 6 percent annual rate in the first four months of 2008 (the latest available data), a slightly faster rate of decline than in the second half of 2007.[2] In May, the average price of existing single-family homes sold—which does not control for changes in the mix of houses sold but is available on a more timely basis—was about 7¼ percent below that of a year earlier. Although lower prices should eventually help bolster housing demand, survey and anecdotal reports suggest that expectations of further house price declines are quite prevalent, a consideration that may make potential buyers reluctant to purchase homes until prices show signs of stabilizing.

The rising volume of foreclosures likely has contributed to falling house prices. Continuing the upward trend that began in late 2006, about 550,000 loans began the foreclosure process in the first quarter of 2008—more than double the average quarterly rate from 2003 to 2005. This rise in foreclosure starts will increase the supply of houses for sale unless borrowers can make up the missed payments or arrange with the lenders or mortgage servicers to have their loans modified.[3] Lenders and mortgage servicers have increasingly been working with borrowers to modify loans to allow borrowers to remain in their homes. However, some borrowers may not be able to afford even reduced monthly payments, and other borrowers may not wish to keep their properties in an environment of falling house prices. Thus, the share of foreclosure starts that

2. This index is the purchase-only version of the repeat-transactions price index for existing single-family homes published by the Office of Federal Housing Enterprise Oversight.

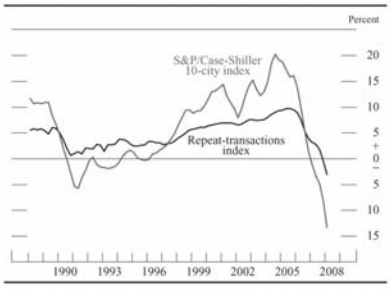
3. A loan may be modified by reducing the principal balance, reducing the interest rate, or extending the term so as to make monthly payments more affordable.

Private housing starts, 1995–2008



NOTE: The data are quarterly and extend through 2008:Q2; the readings for 2008:Q2 are the averages for April and May.
SOURCE: Department of Commerce, Bureau of the Census.

Change in prices of existing single-family houses, 1988–2008

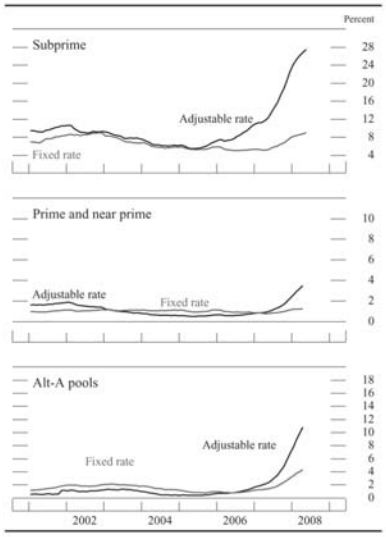


NOTE: The data are quarterly and extend through 2008:Q1; changes are from one year earlier. For the years preceding 1991, the repeat-transaction index includes appraisals associated with mortgage refinancings; beginning in 1991, it includes purchase transactions only. The S&P/Case-Shiller index reflects all arm's-length sales transactions in the metropolitan areas of Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco, and Washington, D.C.
SOURCE: For repeat transactions, Office of Federal Housing Enterprise Oversight; for S&P/Case-Shiller, Chicago Mercantile Exchange.

ultimately result in the loss of a home seems likely to be higher in the current episode than customarily has been the case. (See the box entitled "Recent Federal Reserve Initiatives to Address Problems in the Mortgage Market" on page 6.)

The rates of delinquency continued to rise in the first few months of 2008 across all categories of mortgage loans. Problems remained especially severe for subprime loans. However, the growth rate of subprime delinquencies has slowed this year, while that of prime and near-prime delinquencies—particularly on adjustable-rate loans—has picked up. Credit quality is strongly related to the origination date of mortgage loans, with loans originated in 2006 and 2007 much more likely to experience delinquency and default than loans originated in previous years. The poorer performance of the more recent loan vintages reflects a general deterioration in underwriting standards through early 2007 and the decline in house prices since 2007, which has increased the occurrence of negative homeowner equity for houses purchased near the peak of the real estate market.

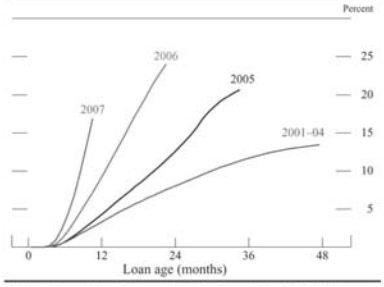
Mortgage delinquency rates, 2001–08



NOTE: The data are monthly. For subprime, prime, and near-prime mortgages, the data extend through April 2008; for mortgages in alt-A pools, which are a mix of prime, near-prime, and subprime mortgages, the data extend through March 2008. Delinquency rate is the percent of loans 90 days or more past due or in foreclosure.

SOURCE: First American LoanPerformance.

Cumulative defaults on subprime 2/28 loans, by year of origination, 2001–07



NOTE: Figure is based on monthly data through March 2008. Each curve represents the fraction of loans originated in the indicated year that had defaulted by the indicated loan age; for example, roughly 8 percent of all loans originated sometime in the years 2001 to 2004 had defaulted by the time they were 24 months old. The last 9 points of the curves for 2005 through 2007 are based on incomplete data. A 2/28 loan is a 30-year loan with a fixed rate for the first 2 years and an adjustable rate for the remaining 28 years.

SOURCE: Staff calculations based on data from First American LoanPerformance.

New subprime mortgage loans remained largely unavailable in the first half of 2008, and borrowers with higher credit risk had to turn to government guarantee programs, such as that of the Federal Housing Administration, to obtain mortgage loans. The availability of prime mortgage credit has been held down by a further tightening of lending standards at many commercial banks, according to the Senior Loan Officer Opinion Survey on Bank Lending Practices conducted in January and April. Securitization of mortgages by the government-sponsored enterprises (GSEs), Fannie Mae and Freddie Mac, was robust through April, although the GSEs tightened standards and increased guarantee fees. For prime loans, interest rates on conforming fixed-rate mortgages were up slightly, on net, over the first half of 2008 after declining moderately late last year.[4] Rates on conforming adjustable-rate mortgages dropped in January but have since reversed a portion of that decline. Offered rates on jumbo fixed-rate loans—which ran up in the second half of last year as the securitization

4. Conforming mortgages are those eligible for purchase by Fannie Mae and Freddie Mac; they must be equivalent in risk to a prime mortgage with an 80 percent loan-to-value ratio, and they cannot exceed the conforming loan limit.

Recent Federal Reserve Initiatives to Address Problems in the Mortgage Market

The high rate of mortgage foreclosures is creating personal, economic, and social distress for many homeowners and communities. The Federal Reserve is collaborating with other regulators, community groups, policy organizations, financial institutions, and public officials to identify solutions to prevent unnecessary foreclosures and their negative effects. The Federal Reserve also has taken a number of regulatory and supervisory actions to reduce the likelihood of such problems in the future.

In 2007, the Federal Reserve and other banking agencies called on mortgage lenders and mortgage servicers to work closely with borrowers who are having difficulty meeting their mortgage payment obligations. Foreclosure cannot always be avoided, but prudent loan workouts and other loss-mitigation techniques that help troubled borrowers can be less costly to lenders than foreclosure.

The Federal Reserve's Homeownership and Mortgage Initiatives reflect a comprehensive strategy across the Federal Reserve System to provide information and outreach to prevent unnecessary foreclosures and to stabilize communities. Under these initiatives, the Federal Reserve has been providing community coalitions, counseling agencies, and others with detailed analyses identifying neighborhoods at high risk of foreclosures. With this information, community leaders can target their scarce resources to borrowers in need of counseling and other interventions that may help prevent unnecessary foreclosures. One example of this effort is the online dynamic maps and data that illustrate nonprime loan conditions across the United States (available at www.newyorkfed.org/mortgagemaps). In addition, community affairs offices across the Federal Reserve System have sponsored or cosponsored more than 75 events related to foreclosures since January 2007, reaching more than 5,800 attendees including lenders, counselors, community development specialists, and policymakers.

The Federal Reserve also is helping to address the challenges that foreclosed homes present, such as decreased home values and vacant properties that can deteriorate from neglect. Toward this end, the Federal Reserve entered into a partnership this spring with NeighborWorks America, a national nonprofit organization, to work together in identifying strategies to mitigate the effect of foreclosures and vacant homes on communities. In June 2007, the Federal Reserve began hosting a series of forums in several cities across the country to examine the effects that foreclosures have on neighborhoods in both strong and weak housing markets and to

(continued on next page)

market for such loans dried up—remained elevated in the first half of 2008, and spreads between rates offered on these loans and on conforming loans stayed unusually wide.[5] To support the market for larger loans, the Congress raised the conforming loan limit temporarily for 2008, which allowed the GSEs to back these mortgages. However, because the prepayment characteristics of jumbo mortgage borrowers are different from those of other borrowers, the GSEs and other market participants decided not to pool these "jumbo conforming" mortgages with other mortgages when creating mortgage-backed securities (MBS). As a result, the secondary market for such mortgages has thus far failed to thrive. Concerns expressed by public policymakers persuaded Fannie Mae and Freddie Mac to make great-

Mortgage rates, 1995–2008

NOTE: The data, which are weekly and extend through July 9, 2008, are contract rates on 30-year mortgages.
SOURCE: Federal Home Loan Mortgage Corporation.

5. Jumbo mortgages are those that exceed the maximum size of a conforming loan; they are typically extended to borrowers with relatively strong credit histories.

(continued from preceding page)

assess the tools available to local communities to address the consequences of foreclosures.

The Federal Reserve is committed to fostering an environment that supports the homeownership goals of creditworthy borrowers with appropriate consumer protection and responsible lending practices. It is using its regulatory and supervisory authorities to help avoid future problems in mortgage markets. In coordination with other federal supervisory agencies and the Conference of State Bank Supervisors, the Federal Reserve issued principles-based guidance on specific types of adjustable-rate subprime mortgages in June 2007. The guidance is designed to help ensure that borrowers who choose an adjustable-rate mortgage get a loan that they can afford to repay and can refinance without prepayment penalty for a reasonable period before the first interest rate reset. The Federal Reserve issued similar guidance on nontraditional mortgages in 2006.

Strong uniform enforcement of the consumer protection regulations that govern mortgage lenders is critical to avoid future problems in mortgage markets. Together with other federal and state supervisory agencies, the Federal Reserve launched a pilot program to review consumer protection compliance and impose corrective or enforcement actions, as warranted, at selected nondepository lenders with significant subprime mortgage operations.

In December 2007, the Board proposed new rules under the Home Ownership and Equity Protection Act to ban unfair and deceptive mortgage lending practices. The Board received about 4,500 comments on the proposal and, taking into consideration these comments, issued new rules in July. For consumers receiving higher-priced mortgages, the final rules prohibit lenders from extending credit without regard to a borrower's ability to repay, require lenders to verify income and assets they rely upon in making loans, require lenders to establish escrow accounts for taxes and insurance, and prohibit prepayment penalties unless certain conditions are met. In addition, the rules also are designed to curtail deceptive mortgage advertising and to ensure that consumers receive mortgage disclosures at a time when the information is likely to be most useful to them.

Finally, the Board also is undertaking a broad and rigorous review of the Truth in Lending Act, which involves extensive consumer testing of mortgage disclosure documents. Clearer and easier-to-understand disclosures should help consumers better evaluate the loans that are offered to them and thus make more-appropriate choices when financing their homes.

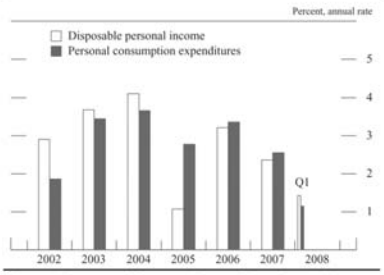
er efforts to jump-start trading in the market for jumbo conforming loans, and the GSEs have recently taken a variety of actions to encourage the development of that market.

The weakness in the housing market was associated with a sharp slowing in the growth of household mortgage debt to an annual rate of 3 percent in the first quarter of 2008, down from 6¾ percent in 2007 and 11¼ percent in 2006. The available indicators suggest that mortgage debt likely slowed further in the second quarter.

Consumer Spending and Household Finance

The growth rate of consumer spending slowed some in the first half of 2008 from its solid pace in the second half of 2007. The slowing reflected a number of restraining influences. The growth rate of real labor income has stepped down substantially since last summer as labor market conditions have weakened and as rising prices for food and energy have put a sizable

Change in real income and consumption, 2002–08



SOURCE: Department of Commerce, Bureau of Economic Analysis.

Consumer sentiment, 1995–2008

NOTE: The Conference Board data are monthly and extend through June 2008. The Reuters/University of Michigan data are monthly and extend through a preliminary estimate for July 2008.

SOURCE: The Conference Board and Reuters/University of Michigan Surveys of Consumers.

dent in consumers' purchasing power. At the same time, household wealth has been reduced by declining values of both equities and houses. In addition, borrowing at banks to finance outlays has become more difficult as terms and standards on consumer credit have been tightened. Although the tax rebates that households began receiving in the spring are likely cushioning these effects to some extent, consumers appear to be quite downbeat. Measures of consumer confidence, which had dropped sharply in the second half of 2007, plunged further in the first half of this year and now stand at or below the low levels reached in the early 1990s.

Real personal consumption expenditures (PCE) rose at a modest annual rate of 1 percent in the first quarter. The available data suggest that spending picked up in the second quarter, reportedly boosted by tax rebates. Spending on light motor vehicles was lackluster in the first half of the year, as high gasoline prices curbed demand for sport-utility vehicles and pickup trucks. Outlays for other types of goods fell slightly in the first quarter but appear to have turned back up in recent months. Spending on services has held up well in recent quarters.

Following a sharp deceleration in the second half of last year, real labor income has been flat so far this year, as nominal wage gains have been eroded by rising consumer prices. Average hourly earnings, a measure of wages for production or nonsupervisory workers, rose at the same rate as the PCE price index in the five months through May; thus, wages were unchanged in real terms. In the past couple of months, part of the strain on household incomes caused by the stagnation in real wages was likely alleviated temporarily by the tax rebates that were paid out in May and June. As a result of these rebates, growth in real disposable personal income (DPI)—that is, after-tax income adjusted for inflation—which was subpar in the fourth quarter of 2007 and the first quarter of 2008, likely jumped in the second quarter. Despite an increase in transfers reflecting the recently passed extension of unemployment insurance benefits, real DPI is likely to fall back in the third quarter as the disbursement of rebates slows considerably.

After several years of providing an impetus to spending, household wealth has been a negative influence this year. Changes in household net worth tend to influence consumer spending most heavily over a period of a year or two. Accordingly, the drop last year in the ratio of household net worth relative to income probably weighed on consumption outlays in the first half of 2008. Moreover, this year's declines in residential real estate values and in equity prices have exacerbated the situation. Flagging wealth has likely left households less inclined to raise their spending at a rate that exceeds income growth, and the personal saving rate has flattened out over the past few quarters. In May, the saving rate jumped to 5 percent, as the immediate effect of tax rebates in many households was to boost savings.

Overall household debt increased at an annual rate of about 3½ percent in the first quarter of 2008, a notable deceleration from the 6¾ percent advance in 2007. Household debt appears to have slowed further in the

Wealth-to-income ratio, 1985–2008

NOTE: The data are quarterly and extend through 2008:Q1. The wealth-to-income ratio is the ratio of household net worth to disposable personal income.

SOURCE: For net worth, Federal Reserve Board, flow of funds data; for income, Department of Commerce, Bureau of Economic Analysis.

Personal saving rate, 1985–2008

NOTE: The data are quarterly and extend through 2008:Q2; the reading for 2008:Q2 is the average for April and May.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

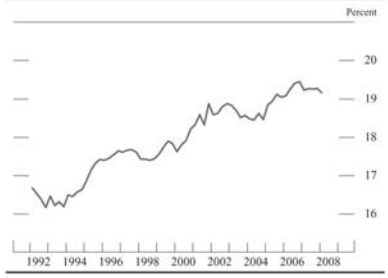
second quarter. Because the growth of household debt was slightly less than the growth in nominal DPI in the first quarter and interest rates on mortgage and consumer debt declined a bit, the ratio of financial obligations to DPI ticked down.

Consumer (nonmortgage) debt expanded at an annual rate of 5¾ percent in the first quarter, about the same pace as in 2007. Consumer debt growth held up despite a reported tightening of lending terms and standards at banks. In part, this pattern may reflect some substitution away from mortgage credit. Also, interest rates on auto loans and on credit cards generally declined in the first half of this year but by less than short-term market interest rates.

Overall credit quality of consumer loans has deteriorated somewhat in recent months. Delinquency rates on consumer loans at commercial banks and captive auto finance companies rose in the first quarter but stayed within the range experienced over the past 10 years. Although household bankruptcy filings remained low relative to the levels seen before the changes in bankruptcy law implemented in late 2005, the bankruptcy rate rose modestly in the first few months of 2008.

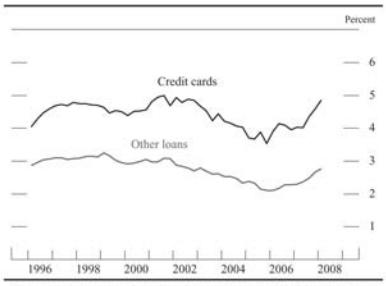
Secondary-market data suggest that funding for credit card and auto loans has been well maintained in recent months. Notably, issuance of asset-backed securities (ABS) tied to credit card loans and auto loans has remained robust, despite spreads of yields on these securities over comparable-maturity swap rates that continue to be near historically high levels. In contrast, pressures in secondary markets for student loan ABS have reportedly affected the availability of such credit. The reimbursement formula for government-guaranteed student loans did not adequately compensate lenders for the higher funding cost in securitization markets, and issuance of guaranteed student loan ABS dropped sharply early in 2008. Legislation enacted in May gave the Department of Education and the Treasury the authority to provide short-term liquidity to institutions that lend to students, and availability of student loans appears to have improved. However, concerns persist about access to loans by students at community and career colleges, as these loans tend to be less profitable for lenders.

Household financial obligations ratio, 1992–2008



NOTE: The data are quarterly and extend through 2008:Q1. The financial obligations ratio equals the sum of required payments on mortgage and consumer debt, automobile leases, rent on tenant-occupied property, homeowner's insurance, and property taxes, all divided by disposable personal income.
SOURCE: Federal Reserve Board.

Delinquency rates on consumer loans, 1996–2008



NOTE: The data are quarterly and extend through 2008:Q1. Delinquency rate is the percent of loans 30 days or more past due.
SOURCE: Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).

The Business Sector

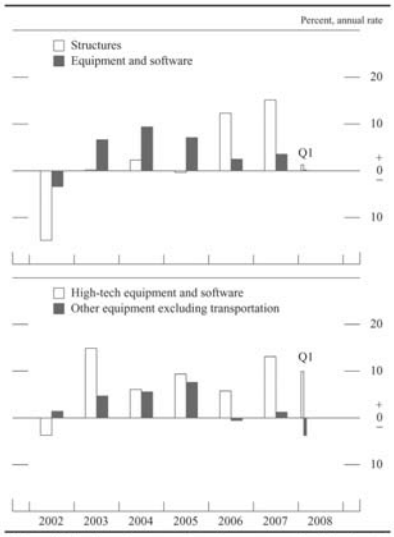
Fixed Investment

After having posted robust gains in the middle of last year, real business fixed investment lost some steam in the fourth quarter and eked out only a small advance in the first quarter of 2008. Economic and financial conditions that influence capital spending deteriorated appreciably late last year and early this year: Business sales slowed, corporate profits fell, and credit conditions for some borrowers tightened. In addition, the heightened concern about the economic outlook may have caused some firms to postpone or abandon plans for capital expansion this year.

Real business outlays for equipment and software were flat in the first quarter. Growth in real spending on high-tech equipment and software slowed to an annual rate of about 10 percent, down from the 13 percent pace recorded in 2007. In addition, business spending on motor vehicles tumbled. Investment in equipment other than high tech and transportation dropped at an annual rate of 3¾ percent in the first quarter after a smaller decline in the previous quarter. The available indicators suggest that capital spending on equipment and software fell in the second quarter: Business purchases of new motor vehicles reportedly slipped again; shipments of nondefense capital goods (adjusted to exclude both transportation items and goods that were sent abroad) were lower, on average, in April and May than in the first quarter; and the tone of recent surveys of business conditions remained downbeat.

Nonresidential construction activity, which exhibited considerable vigor in 2006 and 2007, slowed appreciably in the first quarter of 2008. Real outlays for new commercial buildings declined sharply in the first quarter, and increases in outlays for most other types of building stepped down. More-recent data on construction expenditures suggest that spending on nonresidential structures may have bounced back in the second quarter. However, deteriorating economic and financial conditions indicate that this rebound may be short-lived. In addition to the weakening of business sales and profits, vacancy rates turned up in the first quarter (the latest available data). Moreover, the financing environment has remained difficult; bank lending officers have reported a significant tightening of terms and standards for commercial real estate loans, and funding through the commercial mortgage-backed securities (CMBS) market has continued to be extremely limited.

Change in real business fixed investment, 2002–08

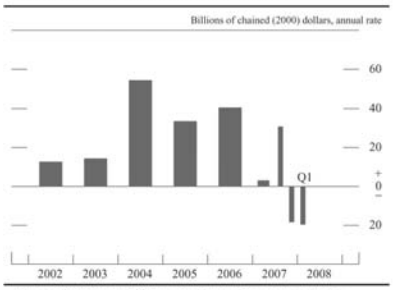


NOTE: High-tech equipment consists of computers and peripheral equipment and communications equipment.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Inventory Investment

Despite sluggish final sales, inventories declined again in the first quarter of 2008 as firms acted promptly to

Change in real business inventories, 2002–08



SOURCE: Department of Commerce, Bureau of Economic Analysis.

prevent inventory imbalances from arising. Automakers, which had worked to bring days' supply down to a sustainable level last year, have moved aggressively to keep production aligned with demand in recent quarters. Excluding motor vehicles, real inventory investment fell in the fourth quarter of 2007 to its lowest level in several years and then turned negative in the first quarter of this year. According to the limited available data, nonauto businesses continued to liquidate real inventories early in the second quarter. Business surveys suggest that companies are generally comfortable with their current stock levels. Nonetheless, a few industries, most notably those producing construction supplies, are showing some evidence of inventory overhangs.

Corporate Profits and Business Finance

The sluggish pace of business investment in recent months is due in part to the weakening of domestic profitability and the tighter credit conditions faced by some businesses. In the first quarter of 2008, total economic profits for all U.S. corporations were down slightly from their level four quarters earlier; a nearly 20 percent rise in receipts from foreign subsidiaries was not sufficient to offset a 2½ percent fall in domestically generated profits. Although profits as a share of output in the nonfinancial corporate sector have declined in recent quarters, they remain well above previous cyclical lows. For companies in the S&P 500, operating earnings per share fell 17 percent over the year ending in the first quarter. This decline was more than accounted for by plummeting earnings at financial firms, which reported large write-downs on leveraged loans and mortgage-related assets.[6] For nonfinancial firms in the S&P 500, earnings rose nearly 11 percent over the four quarters ending in the first quarter of 2008; energy-sector firms had a strong 31 percent increase in earnings, whereas earnings at other nonfinancial firms rose 4½ percent.

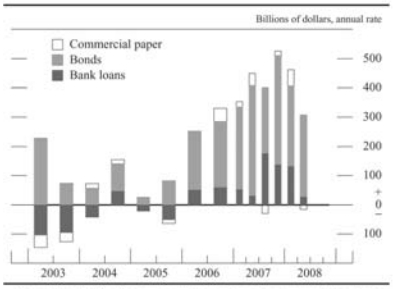
Although credit has remained available to the business sector, yields on corporate bonds increased significantly over the first half of the year, and banks reported tighter terms and standards on commercial and industrial loans and on commercial real estate loans. All told, the growth rate of the debt of nonfinancial businesses fell from 11¾ percent in 2007 to 9¼ percent in the first quarter of 2008; the available data point to a further deceleration in the second quarter of this year.

On balance, the composition of borrowing by nonfinancial businesses has shifted this year toward longer-maturity debt. Net bond issuance by nonfinancial firms has been strong. Speculative-grade issuance, which dropped sharply late last year and was practically nil in the first quarter, rebounded markedly in the second quarter, while investment-grade issuance has continued to be robust. Spreads between yields on investment- and speculative-grade bonds and those on comparable-maturity Treasury securities climbed in January and then surged in March. After narrowing in April and

Before-tax profits of nonfinancial corporations as a percent of sector gross domestic product, 1992–2008

NOTE: The data are quarterly and extend through 2008:Q1. Profits are from domestic operations of nonfinancial corporations with adjustments for inventory valuation and capital consumption.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Selected components of net financing for nonfinancial corporate businesses, 2003–08



NOTE: The data for the components except bonds are seasonally adjusted. The data for 2008:Q2 are estimated.
SOURCE: Federal Reserve Board, flow of funds data.

6. Asset write-downs and capital losses are generally excluded from the calculation of economic profits but are included as an expense in the operating earnings per share of financial firms.

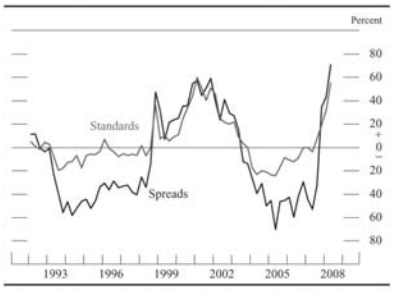
May, bond spreads jumped again in late June. Outstanding commercial paper (CP) for nonfinancial firms has been little changed, on net, this year. Yields on nonfinancial CP have moved down since the beginning of the year, roughly in line with other short-term interest rates, although spreads between yields on lower-rated and higher-rated nonfinancial CP remain well above the levels prevailing before the onset of the financial difficulties last summer.

Commercial and industrial (C&I) loans at banks expanded briskly in the first quarter and then slowed markedly in the second quarter. In the Senior Loan Officer Opinion Survey taken in January and April, considerable net fractions of banks reported that they had tightened credit standards and boosted spreads on C&I loans. According to the respondent banks, the move to a more stringent lending posture mainly reflected a less favorable or more uncertain economic outlook and a reduced tolerance for risk; a significant fraction also noted concerns about the capital position of their own bank as a reason for tightening standards. The secondary market for syndicated leveraged loans remained relatively weak, but loans associated with some prominent buyouts were sold, albeit at a discount.

Gross equity issuance by nonfinancial firms dipped in the first quarter and rebounded in the second quarter. A sharp decline in share repurchases and cash mergers led to a notable reduction of net equity retirement in the first quarter.

The credit quality of nonfinancial corporations generally has remained solid. The six-month trailing bond default rate was very low despite a small tick up in June. The delinquency rate on C&I loans at commercial banks continued the mild increase that began last year, but it remained subdued by historical standards. Ratings downgrades in the first five months of this year were modest, only slightly exceeding upgrades. Balance sheet liquidity at nonfinancial corporations remained

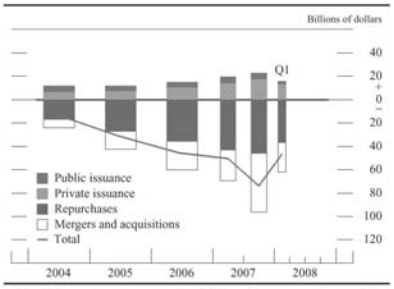
Net percentage of domestic banks tightening standards and increasing spreads on commercial and industrial loans to large and medium-sized borrowers, 1992–2008



NOTE: The data are drawn from a survey generally conducted four times per year; the last observation is from the April 2008 survey, which covers 2008:Q1. Net percentage is the percentage of banks reporting a tightening of standards or an increase in spreads less the percentage reporting an easing or a decrease. Spreads are measured as the loan rate less the bank's cost of funds. The definition for firm size suggested for, and generally used by, survey respondents is that large and medium-sized firms have annual sales of $50 million or more.

SOURCE: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

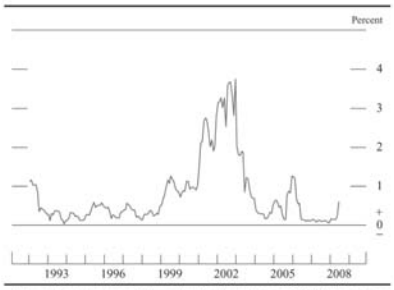
Components of net equity issuance, 2004–08



NOTE: Net equity issuance is the difference between equity issued by domestic companies in public or private markets and equity retired through share repurchases, domestic cash-financed mergers, or foreign takeovers of U.S. firms. Equity issuance includes funds invested by private equity partnerships and stock option proceeds.

SOURCE: Federal Reserve Board, flow of funds data.

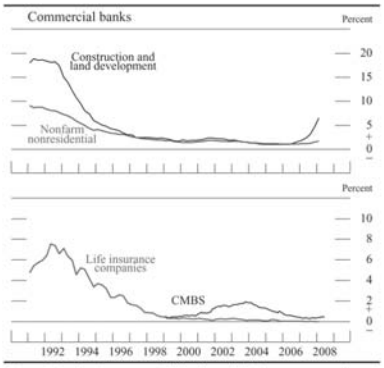
Default rate on outstanding corporate bonds, 1992–2008



NOTE: The data are monthly and extend through June 2008. The rate for a given month is the face value of bonds that defaulted in the six months ending in that month, multiplied by 2 to annualize the defaults and then divided by the face value of all bonds outstanding at the end of the calendar quarter immediately preceding the six-month period.

SOURCE: Moody's Investors Service.

Delinquency rates on commercial real estate loans, 1991–2008



NOTE: The data for commercial banks and life insurance companies are quarterly and extend through 2008:Q1. The data for commercial mortgage-backed securities (CMBS) are monthly and extend through June 2008. The delinquency rates for commercial banks and CMBS are the percent of loans 30 days or more past due or not accruing interest. The delinquency rate for life insurance companies is the percent of loans 60 days or more past due or not accruing interest.

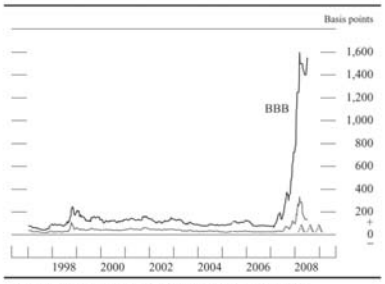
SOURCE: For commercial banks, Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report); for life insurance companies, American Council of Life Insurers; for CMBS, Citigroup.

high through the first quarter of 2008, and leverage stayed very low.

In the April 2008 Senior Loan Officer Opinion Survey, a large fraction of banks reported having tightened credit standards on commercial real estate loans. Delinquency rates on commercial real estate loans for construction and land development projects extended by commercial banks moved sharply higher in the first quarter of 2008 after rising noticeably last year. In contrast, delinquency rates on bank loans that finance existing commercial properties moved up only slightly. Delinquency rates on commercial mortgages held by life insurance companies and those in CMBS pools, which mostly finance existing commercial properties, remained low.

Despite the generally solid performance of commercial mortgages in securitized pools, spreads of yields on CMBS over comparable-maturity swap rates soared to unprecedented levels early in 2008. In recent months, these spreads have narrowed somewhat, but they remain well above levels seen before this year. The

Spreads of 10-year investment-grade commercial mortgage-backed securities over swaps, by securities rating, 1997–2008



NOTE: The data are weekly and extend through July 9, 2008.
SOURCE: Bloomberg.

widening of spreads reportedly reflected heightened concerns regarding standards for underwriting commercial mortgages over the past few years and likely also investors' wariness of structured finance products more generally. After hitting a record level in early 2007, issuance of CMBS dropped sharply late last year and slowed to a trickle so far this year.

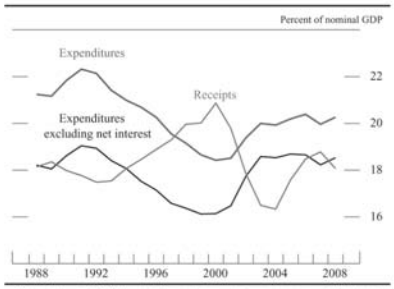
The Government Sector

Federal Government

The deficit in the federal unified budget has widened during the current fiscal year after having narrowed in the preceding few years. A substantial portion of the rebates authorized by the Economic Stimulus Act of 2008 was distributed in May and June, which caused a significant widening of the deficit. In addition, the growth of receipts has slowed in response to the weaker pace of economic activity, and the growth of outlays has stepped up. Over the first nine months of fiscal year 2008—from October through June—the unified budget recorded a deficit that was $148 billion greater than during the comparable period ending in June 2007. When measured relative to nominal GDP, the deficit moved up from 1¼ percent in fiscal 2007 to 2¼ percent during the 12 months ending in June 2008; a continued slow pace of economic activity and additional revenue losses associated with the Stimulus Act are expected to widen the deficit further in the final three months of fiscal 2008.

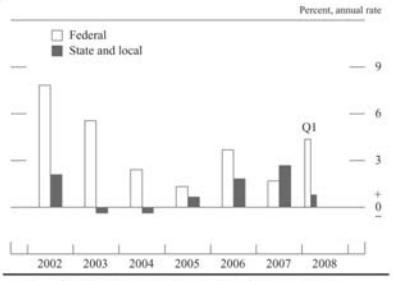
The Economic Stimulus Act is estimated to result in about $115 billion of rebates being sent to households

Federal receipts and expenditures, 1988–2008



NOTE: Through 2007, receipts and expenditures are on a unified-budget basis and are for fiscal years (October through September); gross domestic product (GDP) is for the four quarters ending in Q3. For 2008, receipts and expenditures are for the 12 months ending in June, and GDP is the average of 2007:Q4 and 2008:Q1.
SOURCE: Office of Management and Budget.

Change in real government expenditures on consumption and investment, 2002–08



SOURCE: Department of Commerce, Bureau of Economic Analysis.

in 2008 and 2009. The rebates began to be distributed in the last few days of April, and by the end of June, approximately $80 billion worth of rebates had been disbursed, accounting for more than half of the widening of the budget deficit in the first nine months of fiscal 2008 relative to the same period in fiscal 2007.

The slower pace of economic activity has cut into receipts. Excluding the budgetary effects of stimulus rebates, federal revenues in the first nine months of fiscal 2008 were only 2 percent higher than in the same period in fiscal 2007, down from a rise of 6¾ percent in fiscal 2007 and considerably smaller than the double-digit gains recorded in fiscal 2005 and fiscal 2006. The slowdown in federal revenues has been most pronounced for corporate receipts, reflecting the decline in corporate profits since the middle of 2007. Individual income and payroll tax receipts—excluding the stimulus rebates—also have slowed, likely because of the smaller gains in personal income during the current fiscal year.

Nominal federal outlays in the first nine months of fiscal 2008 were 6½ percent above their level in the comparable period in fiscal 2007, a faster pace of increase than was recorded in fiscal 2007 but generally below the rapid increases seen in fiscal 2002 through 2006. So far this fiscal year, the growth of outlays for defense has stepped up relative to fiscal 2006 and 2007, and spending has continued to rise apace in most major nondefense categories. In the months ahead, outlays will be bumped up further by the extension of eligibility for unemployment insurance benefits to individuals who have exhausted their benefits.

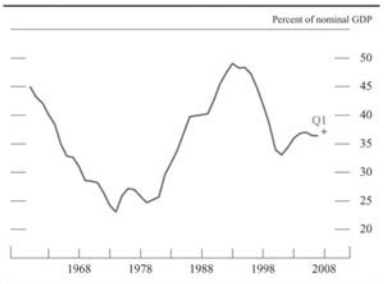
As measured in the national income and product accounts (NIPA), real federal expenditures on consumption and gross investment—the part of federal spending that is a direct component of GDP—increased at an annual rate of 4¼ percent in the first quarter, a contribution of 0.3 percentage point to real GDP growth. Real defense spending accounted for almost the entire rise, as nondefense outlays only edged up. In the second quarter, defense spending appears to have posted another sizable increase, and given currently enacted appropriations, it is likely to rise further in coming quarters.

Federal Borrowing

Federal debt rose at an annual rate of 7½ percent in the first two quarters of fiscal year 2008—from October through March—a notable step-up from the 4¼ percent pace in fiscal 2007. As of the end of March, the ratio of federal debt held by the public to nominal GDP was about 37 percent, slightly higher than in recent years.

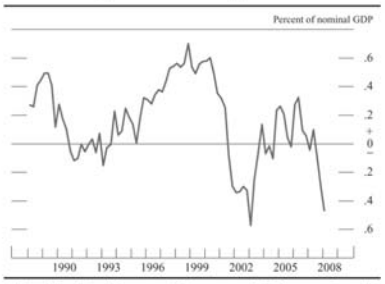
The deterioration in the budget position of the federal government led the Treasury to reintroduce the one-year Treasury bill, which was last issued in 2001. The initial auction on June 3 was very well received, with a bid-to-cover ratio above 3. Issuance also increased for both shorter- and longer-maturity Treasury securities. The proportion of nominal coupon securities purchased at Treasury auctions by foreign investors changed little

Federal government debt held by the public, 1960–2008



NOTE: The data extend through 2008:Q1. The data for debt through 2007 are as of year-end, and the corresponding values for gross domestic product (GDP) are for Q4 at an annual rate; the final observation refers to debt at the end of 2008:Q1, and the corresponding value of GDP is for 2008:Q1 at an annual rate. Excludes securities held as investments of federal government accounts.
SOURCE: Federal Reserve Board, flow of funds data.

State and local government net saving, 1988–2008



NOTE: The data, which are quarterly, are on a national income and product account basis and extend through 2008:Q1.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

over the first half of 2008 and remains in the range of 10 percent to 25 percent observed over the past several years. However, holdings of Treasury securities by foreign official institutions at the Federal Reserve Bank of New York increased more rapidly in the first half of 2008 than over any of the previous three years.

State and Local Government

The fiscal positions of state and local governments began to weaken last year and have continued to deteriorate in 2008. After having improved significantly from 2003 to 2006, net saving by the sector—which is broadly similar to the surplus in an operating budget—turned slightly negative in 2007, and this measure moved further into negative territory in the first quarter of 2008. The deterioration in budget conditions has occurred as increases in revenues have slowed while nominal expenditures have risen at a brisk pace. The slowdown in state income tax revenues has followed a pattern similar to the one that has emerged at the federal level. Corporate receipts have declined, and the rise in individual income taxes has become more subdued. At the same time, state receipts from sales taxes have softened markedly. At the local level, the decline in house prices has not yet begun to curb local property tax revenues appreciably, but increases in local receipts from this source seem likely to slow more noticeably in the next few years.

On the outlays side of the accounts, nominal spending has continued to rise, particularly for expenditures on health care and energy items. In real terms, expenditures on consumption and gross investment by state and local governments (as measured in the NIPA) rose only a bit in the first quarter, as increases in expenditures on current operations were largely offset by a decline in outlays on structures. However, construction expenditures are volatile from quarter to quarter, and the data through May suggest that real state and local expenditures for structures picked up in the second quarter. Meanwhile, state and local hiring remained elevated through June.

State and Local Government Borrowing

Bond issuance by state and local governments slowed moderately in the first quarter of 2008 as the cost of borrowing rose. Investors demanded higher returns, in part because of concerns about the strength of financial guarantors that insure many municipal bonds and in part because of concerns about the effect of a potential economic slowdown on state and local government revenues.[7] Beginning in February, these investor apprehen-

7. Concerns about the financial guarantors arose in 2007, but significant downgrades did not occur until early this year. In June, Moody's and Standard & Poor's downgraded MBIA and Ambac, two of the largest guarantors, from AAA to AA or lower. New bond insurance business has shifted to guarantors that are viewed as financially stronger, and some municipalities have stated their intention to dispense with guarantors and issue on the strength of their own ratings.

sions also led to widespread failures of rate-resetting auctions for auction rate securities (ARS) issued by state and local governments.[8] Pressures in the municipal securities market eased somewhat in the second quarter, along with the broader relaxation of financial market strains. In addition, ratings upgrades of municipalities greatly exceeded downgrades in the second quarter. Since March, municipal bond issuance has rebounded, and a significant fraction of failing ARS issues have been paid down with the proceeds of standard bond issues.

National Saving

Total net national saving—that is, the saving of households, businesses, and governments excluding depreciation charges—dipped below zero in the first quarter of 2008. After having stood at an already low rate of 1¾ percent of nominal GDP in the second quarter of 2007, the national saving rate declined steadily over the subsequent three quarters, as the federal budget deficit widened, the fiscal positions of state and local governments deteriorated, and business saving decreased. Accordingly, total national saving as a share of nominal GDP, which has been declining, on balance, since the late 1990s, has fallen to a historic low (apart from the third quarter of 2005, which was marked by sizable hurricane-related property losses). If not reversed over the longer run, persistent low levels of saving will be associated with either slower capital formation or continued heavy borrowing from abroad, either of which would retard the rise in the standard of living of U.S. residents over time and hamper the ability of the nation to meet the retirement needs of its aging population.

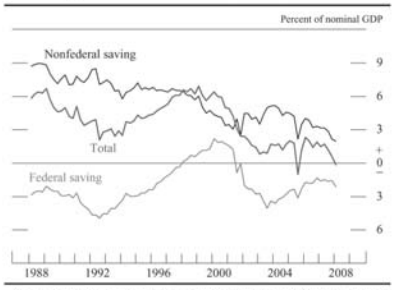
8. ARS are long-term securities whose interest rates are reset through regularly scheduled auctions, typically every 7, 28, or 35 days. As of the end of 2007, the size of the ARS market in the United States was about $330 billion, about half of which was accounted for by municipal securities. A resetting auction fails when investors do not bid for the entire issue at an interest rate below the contract maximum. Upon auction failure, the asset holders from before the auction retain ownership of the securities and receive a specified ceiling interest rate, which is usually, but not necessarily, equal to the maximum bid rate.

The External Sector

International Trade

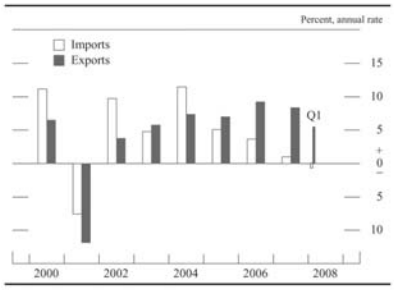
Foreign demand has continued to be an important source of strength for the U.S. economy. Net exports contributed ¾ percentage point to the growth of real GDP in the first quarter of 2008 after adding a similar amount to growth in 2007. The growth of real exports of goods and services expanded at a 5½ percent pace in the first quarter, moderating from the 12½ percent surge recorded in the second half of 2007. Export growth in the first quarter was supported by higher exports of agricultural products, consumer goods, industrial supplies, and services. In contrast, exports of both aircraft and automobiles moved down after rising rapidly in the second half of 2007. Exports to Europe and Latin America rose robustly (in current dollars), while

Net saving, 1988–2008



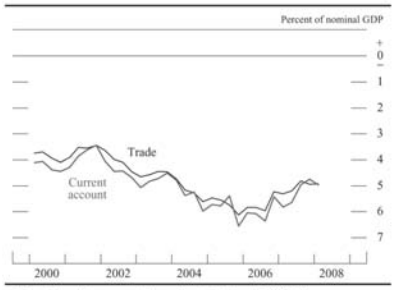
NOTE: The data are quarterly and extend through 2008:Q1. Nonfederal saving is the sum of personal and net business saving and the net saving of state and local governments.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Change in real imports and exports of goods and services, 2000–08



NOTE: Data for 2008:Q1 are expressed as percent change from 2007:Q4.
SOURCE: Department of Commerce.

U.S. trade and current account balances, 2000–08



NOTE: The data are quarterly and extend through 2008:Q1.
SOURCE: Department of Commerce.

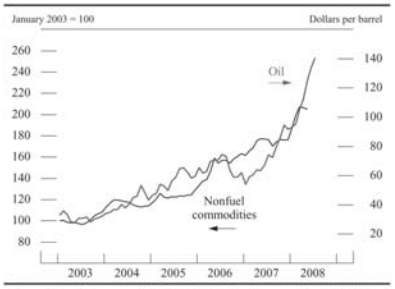
exports to Canada and to OPEC countries fell back. Data for April and May suggest that exports continued to expand in the second quarter, with exports of industrial supplies showing particular strength.

The positive contribution of net exports in the first quarter reflected, in part, a ¾ percent decline in real imports of goods and services. Imports of automotive products and consumer goods fell in line with slowing U.S. domestic demand, more than offsetting higher real imports of oil and a slight increase in imports of capital goods. Imports from China and Mexico declined (in current dollars), whereas imports from Canada, Japan, and OPEC countries expanded. After falling sharply in March, imports rebounded, on average, in April and May, as imports of capital equipment and consumer goods increased strongly.

In the first quarter of 2008, the U.S. current account deficit was $706 billion at an annual rate, or 5 percent of GDP, $25 billion narrower than its level in 2007; the narrowing largely reflects higher net investment income. A large improvement in the non-oil trade deficit was offset by a sharp increase in the bill for imported oil, which resulted from the jump in oil prices.

Compared with 2007, prices for imports of both material-intensive and finished goods are increasing at much faster rates so far this year. Although import price increases also reflect the depreciation of the dollar, rising commodity prices (discussed in more detail in the box entitled "Commodity Prices" on page 18) have significantly boosted the rate of import price inflation. In the first quarter, prices of imported goods excluding oil and natural gas rose at an annual rate of about 7½ percent, a pace more than twice that of the previous year. Available data suggest that import price inflation was sharply higher in the second quarter.

Prices of oil and nonfuel commodities, 2003–08

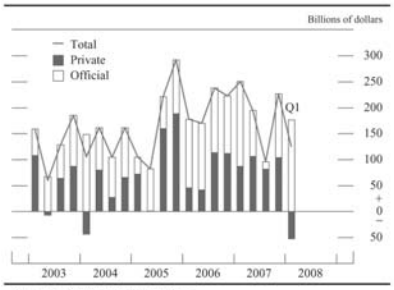


NOTE: The data are monthly. The oil price is the spot price of West Texas intermediate crude oil, and the last observation is the average for July 1–9, 2008. The price of nonfuel commodities is an index of 45 primary-commodity prices, and extends through May 2008.
SOURCE: For oil, the Commodity Research Bureau; for nonfuel commodities, International Monetary Fund.

The Financial Account

In late 2007 and the first quarter of 2008, the U.S. current account deficit was financed primarily by foreign purchases of U.S. securities, as has been the norm in recent years. The global financial turmoil has continued to leave an imprint on both the sources and composition of cross-border financial flows, including a net private outflow in the first quarter. Meanwhile, foreign official inflows provided all of the financing from abroad during the first quarter, driven by net purchases of U.S. Treasury and agency securities by Asian institutions.

U.S. net financial inflows, 2003–08



SOURCE: Department of Commerce.

Commodity Prices

Prices for crude oil and many other commodities continued to soar through the first half of 2008. After shooting up about 60 percent last year, the spot price of West Texas intermediate crude oil has increased an additional 50 percent thus far in 2008, climbing from $92 per barrel in December 2007 to about $140 recently. While weaker economic growth and the high level of prices appear to be damping oil demand in industrialized nations, demand from emerging market countries remains robust. The continued strength in emerging market demand reflects, in part, government subsidies that limit the pass-through of higher crude prices to retail products and thus mute the response to higher prices. Furthermore, on the supply side, incoming information since the beginning of the year has been decidedly downbeat, with non-OPEC production continuing to fall short of expectations. Despite additional investment, oil production capacity has not risen at a pace commensurate with the growth of global demand. The lack of spare capacity has led, in turn, to heightened sensitivity of oil prices to political developments, such as ongoing tensions in the Middle East and instability in Nigeria. The price of the far-dated NYMEX oil futures contract (currently for delivery in 2016) has also risen to about $140 per barrel and suggests that the balance of supply and demand is expected to remain tight for some time to come.

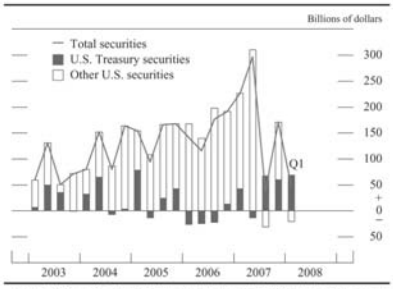
Nearer-term market pressures have been reflected in domestic inventories of both crude oil and refined oil products, which have declined notably in recent months and stand well below year-earlier levels. Inventories also appear to be tight in other countries (although data are less complete for emerging market countries). Lean inventories increase the vulnerability of petroleum markets to any disruptions in production, transportation, and refining, which is of particular concern during hurricane season. The tightness of inventories suggests that the recent increases in oil prices reflect near-term demand and supply pressures, rather than speculative hoarding.

Prices of nonfuel commodities were quite volatile in the first half of 2008. Through early

(continued on next page)

Unusually large net purchases of corporate securities also contributed to foreign official inflows, likely reflecting sovereign wealth fund activity.

Net private foreign purchases of U.S. securities, 2003–08



NOTE: Other U.S. securities include corporate equities and bonds, agency bonds, and municipal bonds.
SOURCE: Department of Commerce.

Foreign private demand appeared to remain robust for the safest U.S. investments—net private purchases of U.S. Treasury securities, which surged in the third quarter of 2007 when the turmoil began, remained at near-record levels through April 2008. In contrast, corporate bond purchases by foreign private investors have been weaker in each quarter of the turmoil than in any previous quarter since 2002. Corporate equity purchases have also been very weak in 2008 through April after a strong rebound in the fourth quarter of 2007. Overall, total inflows from foreign private acquisitions of U.S. securities were well below average in the first quarter of 2008 but slightly above the nine-year low set in the third quarter of 2007 as the turmoil began.

Inflows from private purchases of U.S. securities in the first quarter of 2008 were offset by strong outflows associated with U.S. direct investment abroad and by interbank flows. Somewhat surprisingly given the global financial turmoil, the strength seen in U.S. direct investment abroad in 2007 persisted through the fourth quarter and into the first quarter of 2008. In addition, net lending abroad by U.S.-resident banks, which

(continued from preceding page)

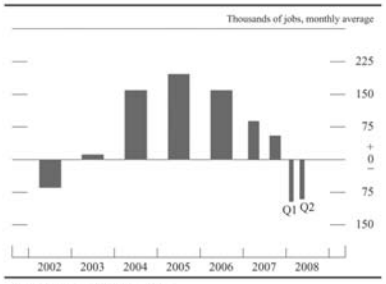
March, prices of many commodities rose sharply, including those for some foods (such as corn and wheat) and metals (in particular, copper and aluminum). This broad-based price increase appears to have been driven mainly by growth in global demand. More recently, however, price movements have been less uniform, and commodities such as wheat and nickel have seen sharp price declines. Nevertheless, some other food commodity prices have continued to soar, particularly the price of corn, which has been affected by weather-related concerns, including the recent floods in the Midwest. The price of rice has also increased sharply this year, which has led a number of rice-producing countries to enact export bans, adding to upward pressure on global prices. Through feed costs, increased grain prices also have been reflected in higher prices for meat and dairy products.

The supply response of farm crops to price increases typically has had a relatively short time lag, usually through increasing land under cultivation. Although increases in acreage devoted to one crop have recently come at the expense of other crops, yields have risen and should continue to do so as more-advanced seed varieties and cultivation techniques are employed.

In addition to supply and demand conditions in the physical markets, other factors have been cited as contributing to the rise in commodity prices in recent years, including depreciation of the dollar and lower interest rates. All else being equal, a lower value of the dollar implies a higher dollar price of commodities, but the causal relationships between the exchange value of the dollar and commodity prices are complex and run in both directions. The fact that commodity prices have risen significantly in terms of all major currencies suggests that factors other than the depreciation of the dollar have been important causes of the rise in prices. Similarly, the relationship between interest rates and commodity prices may depend on what is driving changes in interest rates. For example, to the extent that lower interest rates reflect a relatively weak economy and thus softer demand for commodities, interest rates and commodity prices may tend to move in the same direction. And irrespective of their cause, lower interest rates might also lead to a buildup in commodity inventories—as a result of reduced financing costs of holding inventories—potentially putting upward pressure on prices. However, inventory levels of key commodities have not risen this year, a fact that is at odds with such explanations of price increases that emphasize the role of interest rates.

tends to be quite volatile, has increased with unusual consistency since the turmoil began; these outflows, primarily from foreign-owned banks to their European affiliates, were particularly large in March as conditions in U.S. and European interbank funding markets re-intensified.

Net change in private payroll employment, 2002–08



NOTE: Nonfarm business sector.
SOURCE: Department of Labor, Bureau of Labor Statistics.

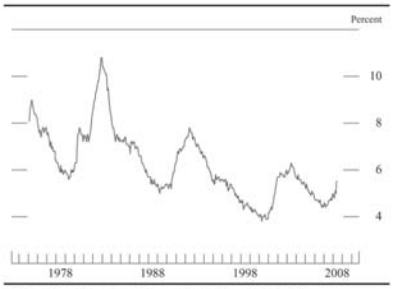
The Labor Market

Employment and Unemployment

The demand for labor has been contracting this year. After having increased 54,000 per month, on average, in the second half of 2007, private payroll employment declined at an average monthly pace of 94,000 in the first half of 2008. Over the same period, the civilian unemployment rate moved up more than ½ percentage point, to 5½ percent.

Job losses in the first half of 2008 were concentrated in the construction and manufacturing sectors. Although businesses in these industries have been trimming payrolls for more than two years, the downsizing has intensified during the past several months. In addition, job losses have begun to mount this year in the whole-

Civilian unemployment rate, 1975–2008



NOTE: The data are monthly and extend through June 2008.
SOURCE: Department of Labor, Bureau of Labor Statistics.

sale and retail trade sectors and in the professional and business services category. Even among the many sectors in which payrolls have continued to expand, such as technical services providers and eating and drinking establishments, job gains have been less robust so far this year than in 2007. A notable exception has been hiring by providers of health and education services, which has remained strong.

The unemployment rate, which rose ½ percentage point in 2007, increased another ½ percentage point in the first half of this year. Initial claims for unemployment insurance and the number of individuals receiving unemployment insurance benefits moved up considerably over the six months ending in June; accordingly, the share of unemployed workers who lost their last jobs (as opposed to those who voluntarily left their jobs or were new entrants to the labor force) rose, on net, this spring. In addition, the percentage of persons who reported that they were working part time for economic reasons increased sharply. Thus far, the labor force participation rate, which typically falls during periods of labor market weakness, has remained steady and stood at 66.1 percent in June, near the middle of the range that has prevailed since early 2007.

Other indicators also point to further deterioration in labor market conditions this year: Private surveys of businesses suggest that firms plan to continue cutting back on hiring in the near term. At the same time, according to surveys of consumers, assessments of labor market prospects in the year ahead, which had worsened late last year, slipped further in the first half of 2008.

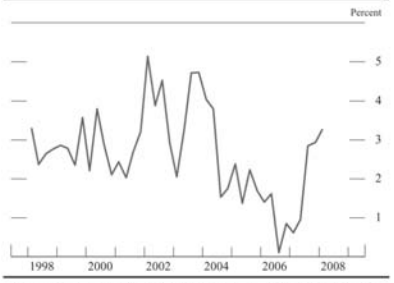
Labor force participation rate, 1975–2008

NOTE: The data are monthly and extend through June 2008.
SOURCE: Department of Labor, Bureau of Labor Statistics.

Productivity and Labor Compensation

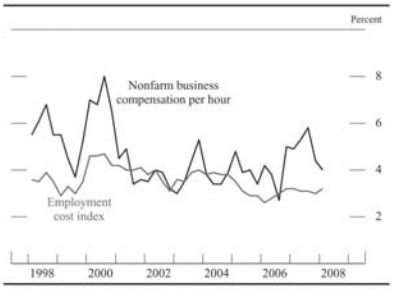
Gains in labor productivity have moved up significantly of late. According to the latest available published data, output per hour in the nonfarm business sector rose 3¼ percent during the year ending in the first quarter of 2008, up from the ½ percent increase recorded over the preceding four quarters. On average, the rise in productivity over the past two years, although less than the outsized increases posted earlier in the decade, suggest that the fundamental forces that in recent years have supported a solid uptrend in underlying productivity remain in place. Those forces include the rapid pace of technological change and the ongoing efforts by firms

Change in output per hour, 1998–2008



NOTE: Nonfarm business sector. The data are quarterly and extend through 2008:Q1. Change is over four quarters.
SOURCE: Department of Labor, Bureau of Labor Statistics.

Measures of change in hourly compensation, 1998–2008

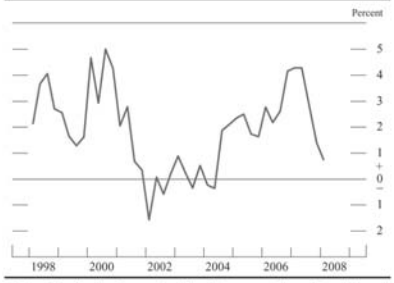


NOTE: The data are quarterly and extend through 2008:Q1. For nonfarm business compensation, change is over four quarters; for the employment cost index (ECI), change is over the 12 months ending in the last month of each quarter. The nonfarm business sector excludes farms, government, nonprofit institutions, and households. The sector covered by the ECI used here is the nonfarm business sector plus nonprofit institutions. A new ECI series was introduced for data as of 2001, but the new series is continuous with the old.
SOURCE: Department of Labor, Bureau of Labor Statistics.

to use information technology to improve the efficiency of their operations. Increases in the amount of capital, especially high-tech capital, available to each worker also appear to be providing considerable impetus to productivity growth.

Broad measures of hourly labor compensation have not kept pace with the rapid increases in both overall consumer prices and labor productivity, despite a labor market that, until recently, had been generally tight. The employment cost index (ECI) for private industry workers, which measures both wages and the cost to employers of providing benefits, rose 3¼ percent in nominal terms between March 2007 and March 2008 (the latest available data), the same gain as was recorded over the preceding 12 months. Although the increase in the wage and salary component of the ECI edged down, the rise in benefits costs picked up markedly. Benefits costs were pushed up by a sharp rise in employer contributions to retirement plans, which likely reflected, in part, the weak performance of the stock market and an atypically small increase in employer contributions in the preceding year.

Change in unit labor costs, 1998–2008



NOTE: Nonfarm business sector. The data are quarterly and extend through 2008:Q1. Change is over four quarters.
SOURCE: Department of Labor, Bureau of Labor Statistics.

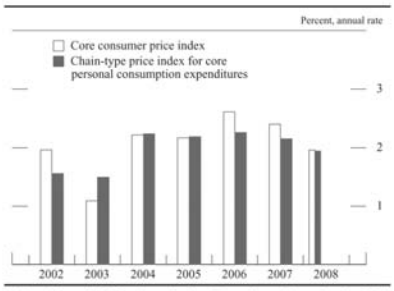
According to preliminary data, compensation per hour in the nonfarm business (NFB) sector—an alternative measure of hourly compensation derived from the data in the NIPA—rose 4 percent over the year ending in the first quarter of 2008, down from a 5 percent gain in the previous year. Because of the slower growth in NFB hourly compensation and the faster growth in productivity over the period, unit labor costs rose just ¾ percent over the year ending in the first quarter of 2008 after having increased 4¼ percent over the preceding year. On average, the rise in unit labor costs over the past two years is about on par with the increases recorded in the preceding two years.

Prices

Headline inflation remained elevated in the first half of 2008, as prices for both food and energy continued to surge. The chain-type price index for personal consumption expenditures increased at an annual rate of 3.4 percent between December 2007 and May 2008, about the same as the brisk pace registered over the 12 months of 2007. Excluding food and energy items, the PCE price index rose at an annual rate of 1.9 percent over the first 5 months of the year, down from the 2.2 percent increase over the 12 months of 2007.

Energy prices, which jumped 20 percent over 2007, continued to soar in the first five months of this year. Spurred by rising crude oil costs, motor fuel prices continued to move up through May, and increases in prices of heating fuel and natural gas also jumped appreciably. Furthermore, the pass-through of the record-high levels of crude oil prices into retail gasoline prices was only partial, and wholesale and retail margins were unusually compressed in May. As these margins return to more typical levels, retail prices are likely to rise further. Indeed, survey evidence suggests that prices at the pump jumped again in June and early July. The recent pickup in natural gas prices apparently reflected substitution by utilities and other users away from relatively

Change in core consumer prices, 2002–08



NOTE: Through 2007, change is from December to December; for 2008, change is from December to May.

SOURCE: For core consumer price index, Department of Labor, Bureau of Labor Statistics; for chain-type price index, Department of Commerce, Bureau of Economic Analysis.

Alternative measures of price change, 2007–08

Percent

Price measure	2007	2008
Chain-type (Q1 to Q1)		
Gross domestic product (GDP)	2.9	2.2
Excluding food and energy	2.9	1.9
Gross domestic purchases	2.6	3.2
Personal consumption expenditures (PCE)	2.3	3.4
Excluding food and energy	2.4	2.0
Market-based PCE excluding food and energy	2.2	1.8
Fixed-weight (Q2 to Q2)		
Consumer price index	4.0	3.8
Excluding food and energy	2.3	2.2

NOTE: Changes are based on quarterly averages of seasonally adjusted data. For the consumer price index, the 2008:Q2 value is calculated as the average for April and May compared with the average for the second quarter of 2007 and is expressed at an annual rate.

SOURCE: For chain-type measures, Department of Commerce, Bureau of Economic Analysis; for fixed-weight measures, Department of Labor, Bureau of Labor Statistics.

expensive crude oil as well as the unexpected shutdown of some production in the Gulf of Mexico during the spring.

Food prices have also picked up further this year. After climbing 4¾ percent in 2007, the PCE price index for food and beverages increased at an annual rate of more than 6 percent between December 2007 and May 2008. High grain prices and strong export demand have been primarily responsible for sizable increases in the retail prices of poultry, fish, eggs, cereal and bakery items, fats and oils, and a variety of other prepared foods. In addition, the index for fruits and vegetables rose at an annual rate of 7¼ percent over the first five months of the year, likely reflecting, in part, higher input costs. Although world grain production improved this spring, excessively wet weather and flooding in the Midwest boosted spot prices for corn and soybeans in June.

The small decline in core PCE price inflation this year masked some substantial—but largely offsetting—crosscurrents. Shelter costs have continued to decelerate as housing markets have softened further. In addition, a moderation in the pace of medical care price increases has also held down core price inflation this year. In contrast, prices of core services besides medical and shelter costs have increased more rapidly. Similarly, prices of core goods, which declined some in 2007, were about flat, on net, over the first five months of this year.

More fundamentally, increased slack in labor and product markets is likely damping price increases this year. However, a number of other factors are putting upward pressure on core inflation. Higher prices for energy and other industrial commodities continue to add to the cost of producing a wide variety of goods, and increases in the prices of non-oil imports have picked up appreciably. Moreover, inflation expectations, especially for the near term, have moved up since the turn of the year. Probably reflecting the elevated level of actual headline inflation, the median expectation for year-ahead inflation in the Reuters/University of Michigan Surveys of Consumers moved up to about 3½ percent at the end of 2007 and then continued to rise in 2008; it reached 5.3 percent in the preliminary July estimate. However, the upward movement in longer-run inflation expectations has been much less pronounced. According to the preliminary July result in the Reuters/University of Michigan survey, median 5- to 10-year inflation expectations were 3.4 percent for a third consecutive month, compared with the readings in the range of 3 percent to 3¼ percent that had prevailed for the preceding few years. Similarly, estimates of 10-year inflation compensation, as measured by the spreads of yields on nominal Treasury securities over those on their inflation-protected counterparts, have moved up about 20 basis points, on balance, since the turn of the year. However, most of that increase reflected higher inflation compensation over the next 5 years; estimates of inflation compensation 5 to 10 years ahead were up only 10 basis points by early July. According to the Survey of Professional Forecasters conducted by the Federal Reserve Bank of Philadelphia, expectations of inflation over the next 10 years ticked up in the first half of 2008, though they remain essentially unchanged since 1998.

Broader, NIPA-based measures of inflation, which are available only through the first quarter of this year, slowed relative to the pace of the past couple of years.

The latest data show a rise in the price index for GDP less food and energy of about 2 percent over the year ending in the first quarter, down about 1 percentage point from the figure for the year ending in the first quarter of 2007. In addition to a lower reading for core PCE inflation over the past four quarters, prices for some other components of final demand, especially construction, decelerated.

Financial Markets

The elevated risk spreads, high volatility, and impaired functioning that characterized domestic and international financial markets in the second half of 2007 continued through the first half of 2008. Spillovers from the slumping U.S. housing market were the largest direct source of these pressures, but a generalized flight from riskier assets—particularly structured credit products—and worries about a global economic slowdown also contributed to financial strains.[9] The Federal Reserve lowered the target federal funds rate an additional 225 basis points over the first four months of 2008 in response to a deteriorating outlook for economic activity.

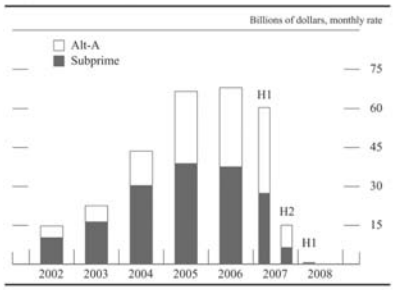
Financial strains increased significantly during the first quarter, leading to a liquidity crisis in March at The Bear Stearns Companies, Inc., a major investment bank, and to its subsequent acquisition by JPMorgan Chase & Co. Additional actions taken by the Federal Reserve to improve market functioning and liquidity, including the introduction of liquidity facilities for primary dealers, appeared to have an ameliorative effect, and tensions eased somewhat in the second quarter. (See the box entitled "The Federal Reserve's Liquidity Operations" on page 26.) Nevertheless, conditions in a broad range of domestic and international financial markets remained strained relative to previous years. This week, the Board of Governors announced a temporary arrangement that allows the Federal Reserve to extend credit to Fannie Mae and Freddie Mac, if necessary.

Market Functioning and Financial Stability

The deteriorating performance of subprime mortgages in the United States prompted widespread strains and turbulence in domestic and international financial markets in the second half of 2007. Substantial losses on even the highest-rated structured products based on subprime mortgages caused market participants to reassess the risks associated with other structured financial instruments and raised concerns about the exposures of major financial institutions to these assets. As liquidity in markets for structured products evaporated, banks were forced, at least temporarily, to hold more assets on their balance sheets than they anticipated. In addition, banks' losses on mortgage-related securities and other assets prompted credit concerns among counterparties. Both of these factors contributed to strains in bank funding markets. The resulting deleveraging in the financial sector reduced the availability of credit to the overall economy. By late 2007, U.S. house prices had begun to fall, residential investment was contracting sharply, and indicators of overall economic activity had softened noticeably. These developments induced investors to pull back from a broader range of financial assets, leading to impaired liquidity conditions in many markets, with widened risk spreads and elevated volatilities.

This market turbulence continued into early 2008, as liquidity in many financial markets continued to be impaired and risk spreads remained wide. After declining sharply late last year, issuance of non-agency-sponsored mortgage-backed securities essentially came to a halt by the beginning of 2008, and secondary-market trades of these assets were rare. Price indexes of non-agency-sponsored subprime MBS based on derivatives markets declined further. However, the unusual pressures that had been apparent in short-term

Gross issuance of securities backed by alt-A and subprime mortgage pools, 2002–08



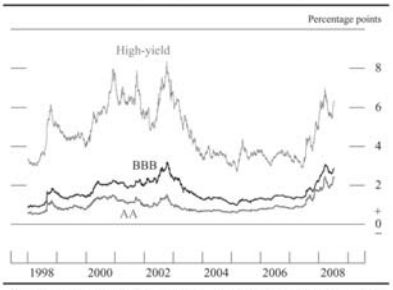
NOTE: Mortgages in alt-A pools are a mix of prime, near-prime, and subprime mortgages; such loans are typically made to higher-quality borrowers but have nontraditional amortization structures or other nonstandard features.
SOURCE: *Inside MBS & ABS.*

9. In a structured credit product, the credit risk of a portfolio of underlying exposures is segmented into tranches of varying seniority and risk exposure.

Price indexes of subprime mortgage-backed securities based on credit default swaps, 2007–08

NOTE: The data are daily and extend through July 9, 2008. The series shown refer to pools of mortgages that were originated in 2006:H2.
SOURCE: Markit.

Spreads of corporate bond yields over comparable off-the-run Treasury yields, by securities rating, 1998–2008



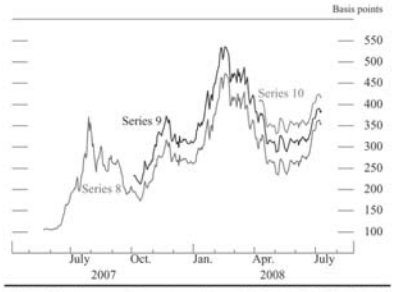
NOTE: The data are daily and extend through July 9, 2008. The spreads shown are the yields on 10-year bonds less the 10-year Treasury yield.
SOURCE: Derived from smoothed corporate yield curves using Merrill Lynch bond data.

investment-grade funding markets in December eased considerably in January, owing to a combination of the passing of year-end balance sheet concerns and the provision of additional liquidity by the Federal Reserve and foreign central banks.

In February and March, short- and long-term funding markets came under renewed pressure after reports of further losses and write-downs at major banks, broker-dealers, and the government-sponsored enterprises. Fears of a weakening economy exacerbated a generalized flight from all but the safest assets. Repurchase agreement (repo) market investors exhibited a marked preference for Treasury collateral and pushed rates on Treasury general collateral repos to historical lows that were well below the target federal funds rate. As liquidity for MBS not sponsored by the GSEs and for other private-label asset-backed securities dried up, the heightened uncertainty regarding values of these instruments led to an unprecedented increase in the margin, or "haircut," required on repos based on such collateral; the interest rate spread on these repos also rose. Spreads of corporate and GSE bond yields over yields on comparable-maturity Treasury securities jumped to multiyear highs. Ratios of yields on municipal bonds to yields on Treasury securities spiked, and failures were widespread in the auction rate securities markets for municipal securities, student loans, and other assets. Prices fell in the secondary market for leveraged loans, and implied spreads on indexes of loan-only credit default swaps, or LCDX, reached record levels in February. Liquidity was strained in many markets; for example, in the market for Treasury coupon securities, bid-asked spreads and spreads between yields on off-the-run and on-the-run securities reached multiyear highs. Bid-asked spreads in the leveraged loan market also widened noticeably. The orderly resolution of the Bear Stearns situation along with the implementation of the Primary Dealer Credit Facility and the Term Securities Lending Facility in March appeared to reduce strains in short-term funding markets and to relieve liquidity pressures more broadly across fixed-income markets (see the box entitled "The Federal Reserve's Liquidity Operations" on page 26).

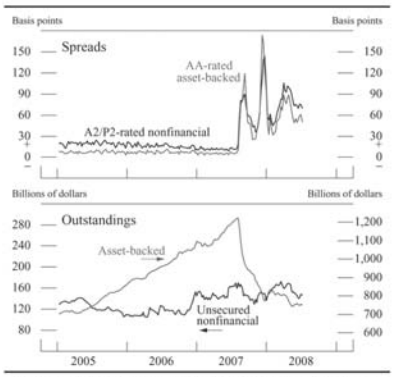
Even though conditions in several markets improved somewhat after mid-March, pressures in some short-

LCDX indexes, 2007–08



NOTE: The data are daily and extend through July 9, 2008. Each LCDX index consists of 100 single-name credit default swaps referencing entities with first-lien syndicated loans that trade in the secondary market for leveraged loans. Series 8 began trading on May 22, 2007, series 9 on October 3, 2007, and series 10 on April 8, 2008.
SOURCE: Markit.

Commercial paper, 2005–08

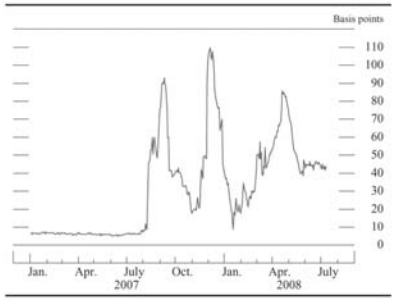


NOTE: The data are weekly and extend through July 9, 2008. Commercial paper yield spreads are for a 30-day maturity and are expressed relative to the AA nonfinancial rate. Outstandings are seasonally adjusted.
SOURCE: Depository Trust and Clearing Corporation.

term funding markets continued to intensify into April. Yield spreads rose in April on unsecured financial, asset-backed, and lower-rated nonfinancial commercial paper. Interbank term funding pressures, as measured by spreads of term London interbank offered rates over comparable-maturity overnight index swap rates, peaked in April but have since moved somewhat lower, at least for terms of three months and less. The expansion in May of the Federal Reserve's Term Auction Facility and of the associated swap lines with the European Central Bank and the Swiss National Bank appears to have contributed to this easing of pressures. However, for interbank funding at terms greater than three months, transaction volumes are reportedly low, and spreads remain high.

In longer-term financial markets, pressures generally eased in April and May. Spreads of conforming mortgage rates and corporate bond yields over yields on comparable-maturity Treasury securities narrowed, and prices and liquidity in the secondary market for leveraged loans increased. However, yield spreads for corporate bonds and mortgages moved higher in June. Equity prices of financial intermediaries, including the housing-related GSEs, Fannie Mae and Freddie Mac, dropped sharply in June and early July as concerns mounted both about their losses and longer-term profitability and about the prospects for earnings dilution given the considerable new capital that may need to be raised. Overall, indicators of financial market strains remain elevated compared with their levels in previous years.

One-month Libor minus overnight index swap rate, 2007–08

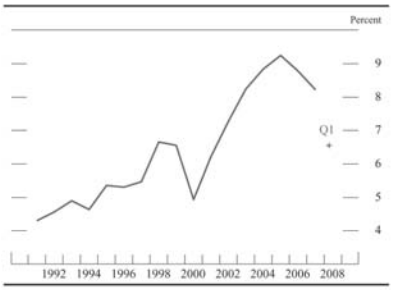


NOTE: The data are daily and extend through July 10, 2008. An overnight index swap (OIS) is an interest rate swap with the floating rate tied to an index of daily overnight rates, such as the effective federal funds rate. At maturity, two parties exchange, on the basis of the agreed notional amount, the difference between interest accrued at the fixed rate and interest accrued by averaging the floating, or index, rate. Libor is the London interbank offered rate.
SOURCE: For Libor, British Bankers' Association; for the OIS rate, Prebon.

Debt and Financial Intermediation

The total debt of the domestic nonfinancial sector expanded at an annual rate of 6½ percent in the first quarter of 2008, a somewhat slower pace than in 2007.

Change in total domestic nonfinancial debt, 1991–2008



NOTE: The data extend through 2008:Q1. Through 2007, the data are annual and are computed by dividing the annual flow for a given year by the level at the end of the preceding year; the final observation refers to 2008:Q1 at an annual rate.
SOURCE: Federal Reserve Board, flow of funds data.

The Federal Reserve's Liquidity Operations

In response to serious financial strains, the Federal Reserve has taken a number of steps since August 2007 to enhance liquidity and foster the improved functioning of financial markets and thereby promote its dual objectives of maximum employment and price stability.

The Federal Reserve eased the terms of access for borrowing by depository institutions under the regular primary credit program, or discount window. The spread of the primary credit rate over the target federal funds rate was narrowed from 100 basis points to 50 basis points in August 2007 and to 25 basis points in March. The maximum loan term was extended to 30 days in August 2007 and to 90 days in March; institutions have the option to renew term loans so long as they remain in sound financial condition. Over time, more institutions have used the discount window, and the more accommodative terms for borrowing at the window have reportedly improved confidence by assuring depository institutions that backstop liquidity will be available should they need it.

In December 2007, the Federal Reserve introduced the Term Auction Facility (TAF), through which predetermined amounts of discount window credit are auctioned every two weeks to eligible borrowers for terms of about one month. In effect, TAF auctions are similar to open market operations but are conducted with depository institutions rather than primary dealers and against a much broader range of collateral than is accepted in standard open market operations. The TAF appears to have overcome the reluctance to borrow associated with standard discount window lending because of its competitive auction format, the certainty that a large amount of credit would be made available, and the fact that it is not designed to meet urgent funding needs. Indeed, a large number of banks—ranging at various points in time from around 50 to more than 90—have participated in each of the 16 auctions held thus far. The size of individual TAF auctions was raised in several steps from an initial level of $20 billion at inception last December to $75 billion most recently; the amount of TAF credit currently outstanding is $150 billion.

In conjunction with the introduction of the TAF, the Federal Reserve also established swap lines with the European Central Bank and the Swiss National Bank to provide dollar funds to facilitate dollar lending by those central banks to banks in their jurisdictions. These swap lines have been enlarged over time and currently stand at $50 billion with the European Central Bank and $12 billion with the Swiss National Bank.

In response to the unprecedented pressures in short-term repurchase agreement (repo) markets earlier this year, the Federal Reserve initiated a special program of 28-day term repurchase agreements; $80 billion of such agreements are currently outstanding. These agreements were designed to enhance the ability of primary dealers to obtain term funding for any assets that are eligible as collateral in conventional open market operations. Also, on March 11, the Federal Reserve announced plans to create the Term Securities Lending Facility (TSLF), in which the Federal Reserve lends Treasury securities held in its portfolio at auction against the collateral of high-grade securities held by dealers. In addition to conventional open market operation collateral—Treasury securities, agency securities, and agency-sponsored mortgage-backed securities (MBS)—the Federal Reserve now accepts AAA-rated residential MBS, commercial MBS, and other asset-backed securities as collateral at the TSLF. The Federal Reserve sets a minimum

(continued on next page)

The moderation in borrowing was mainly accounted for by a slowdown in the growth of household debt, particularly mortgage debt. Borrowing by nonfinancial businesses also decelerated, but at a 9¼ percent pace, it was still high by historical standards. Preliminary data suggest that overall debt growth slowed further in the second quarter.

Commercial bank credit increased at an annual rate of 4¾ percent in the first half of 2008, down significantly from the 10¼ percent expansion registered in 2007.[10] Commercial and industrial loans decelerated sharply after growing at an annual rate of more than 25 percent in the fourth quarter of 2007. The surge in C&I loans late last year reportedly reflected, in part, the difficulties that banks faced in selling syndicated loans to nonbank investors; as a result, banks had to fund a

10. The growth rate of bank credit in 2007 has been adjusted to remove the effects of the conversion of a large commercial bank to a thrift institution.

(continued from preceding page)

bid rate for each TSLF auction. Bids submitted at most TSLF auctions have fallen short of the announced auction quantities. Nevertheless, market participants have indicated that the TSLF has contributed to improved functioning in repo markets.

Pressures in short-term funding markets worsened sharply in mid-March. On March 13, The Bear Stearns Companies, Inc., a prominent investment bank and primary dealer, advised the Federal Reserve and other government agencies that its liquidity position had deteriorated significantly and that it would be forced to file for bankruptcy the next day unless alternative sources of funds became available. A bankruptcy filing would have forced the secured creditors and counterparties of Bear Stearns to liquidate the underlying collateral, and given the illiquidity of markets, those creditors and counterparties might well have sustained substantial losses. If they had responded to losses or the unexpected illiquidity of their holdings by pulling back from providing secured financing to other firms and by dumping large volumes of illiquid assets on the market, a much broader financial crisis likely would have ensued with consequent harm to the overall economy. In such circumstances, the Federal Reserve Board judged that it was appropriate to use its emergency lending authorities under the Federal Reserve Act to avoid a disorderly closure of Bear Stearns. Accordingly, the Federal Reserve, after discussions with the Securities and Exchange Commission and in close consultation with the Treasury, agreed to provide short-term funding to Bear Stearns through JPMorgan Chase & Co. Over the following weekend, JPMorgan Chase agreed to purchase Bear Stearns and assume the company's financial obligations. The Federal Reserve, again in close consultation with the Treasury, agreed to supply term funding, secured by $30 billion in Bear Stearns assets, to facilitate the purchase. JPMorgan Chase completed the acquisition of Bear Stearns on June 26, and the Federal Reserve extended approximately $29 billion of funding on that date.

In a further effort to prevent a possible downward spiral in financial markets, the Federal Reserve also used its emergency authorities to create the Primary Dealer Credit Facility (PDCF) in mid-March. The PDCF allows primary dealers to borrow at the discount window against collateral that includes a broad range of investment-grade securities. In effect, the PDCF provides primary dealers with a liquidity backstop similar to the discount window that is available to depository institutions.

These liquidity measures appear to have contributed to some improvement in financial markets since late March.

Over recent days, the share prices of Fannie Mae and Freddie Mac dropped sharply on investor concerns about their financial condition and capital position. The Treasury announced a legislative initiative to bolster the capital, access to liquidity, and regulatory oversight of the government-sponsored enterprises (GSEs). As a supplement to the Treasury's existing authority to lend to the GSEs, the Board of Governors established a temporary arrangement that allows the Federal Reserve to extend credit to Fannie Mae and Freddie Mac, if necessary. In establishing this arrangement, the Board exercised its authority under section 13(13) of the Federal Reserve Act. Credit under this arrangement will be extended at the primary credit rate and secured by government and federal agency securities.

number of previously committed large syndicated deals on their balance sheets. In the first quarter of 2008, C&I loans grew at a lower but still quite fast rate of 16¼ percent, with part of the strength reportedly due to increased utilization of existing credit lines, the pricing of which reflected previous lending practices. In the second quarter, C&I lending moderated significantly further, a pattern consistent with reports from the April Senior Loan Officer Opinion Survey, which indicated a further tightening of credit standards and terms and weakening of demand for C&I loans. Commercial real estate loans grew at an annual rate of about 9¾ percent in the first half of 2008, only slightly slower than their pace in 2007.

After contracting sharply in the final quarter of 2007, the outstanding stock of residential mortgages at commercial banks rose 3½ percent in the first quarter, in part because of a sluggish pace of securitization. In the second quarter, however, banks' holdings of residential mortgage loans fell again, a pattern consistent

Commercial bank profitability, 1988–2008

NOTE: The data extend through 2008:Q1. The data are annual through 2007; the final observation refers to 2008:Q1 at an annual rate.
SOURCE: Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).

with the ongoing weakness in the housing market and the reduced availability of mortgage credit. Growth of home equity lines of credit picked up significantly in the first half of 2008, likely because of the decline in short-term market rates to which such loans are generally tied. However, commercial banks have taken steps to limit their exposure to these loans; according to the April Senior Loan Officer Opinion Survey, a significant portion of respondents indicated that they had tightened their credit standards for approving new applications for home equity lines of credit, and a notable proportion reported that they had also firmed lending terms on existing lines, mainly in response to declines in property values. Despite the reported tightening of credit conditions in the household sector, consumer loans grew at a moderate pace in the first half of 2008.

Profitability of the commercial banking sector improved somewhat in the first quarter of 2008 but remained well below the levels seen before the summer of 2007. Many large banks received a significant boost to their first-quarter profits as a result of their stakes in Visa—the initial public offering of which occurred in March. However, continued write-downs of mortgage-related assets and leveraged loans, along with increasing loan-loss provisions, held profits down in the first quarter. Concerns about recent and potential losses have weighed heavily on bank stock prices this year. The median spread on credit default swaps on the senior debt of major banks climbed from 50 basis points at the end of 2007 to more than 100 basis points in mid-March. After declining noticeably in April and May, it returned close to the March peak in late June.

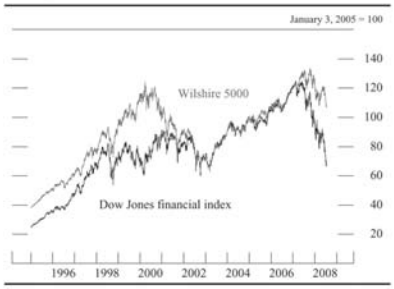
The overall delinquency rate on loans held by commercial banks rose in the first quarter to its highest level since the early 1990s, and the charge-off rate increased to the upper end of its range since 2000. The deterioration in credit quality was accounted for primarily by continued erosion in the performance of residential mortgages and a considerable worsening in construction and land development loans, but performance of most other types of loans also weakened. To bolster equity positions diminished by asset write-downs and loan-loss provisions, commercial banks raised a substantial volume of capital in the first half of 2008; some banks reduced dividends to further shore up their capital.

Equity Markets

Overall, share prices have dropped about 15 percent from the end of 2007. The declines were led by the financial sector, especially depository institutions and broker-dealers, which fell 37 percent and 41 percent, on average, respectively. The energy and basic materials sectors avoided the downtrend and have changed little on net.

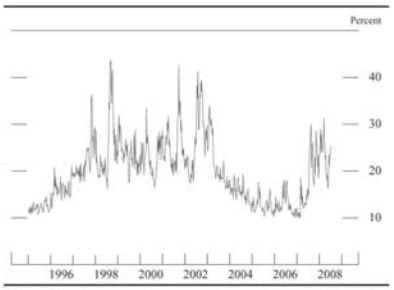
Actual and implied volatilities of broad equity price indexes shot up last year with the onset of financial strains. The partial easing of financial strains in the second quarter was associated with modest declines in the actual and implied volatilities of equity prices to levels still above those of the past few years. The 12-month-forward expected earnings-price ratio for S&P 500 firms jumped in the first half of 2008, while the long-term real Treasury yield rose only slightly. The difference between these two values—a rough measure of the premium that investors require for holding equity

Stock price indexes, 1995–2008



NOTE: The data are daily and extend through July 9, 2008.
SOURCE: Dow Jones Indexes.

Implied S&P 500 volatility, 1995–2008



NOTE: The data are weekly and extend through the week ending July 11, 2008. The final observation is an estimate based on data through July 9, 2008. The series shown—the VIX—is the implied 30-day volatility of the S&P 500 stock price index as calculated from a weighted average of options prices.
SOURCE: Chicago Board Options Exchange.

shares—has reached the high end of its range over the past 20 years.

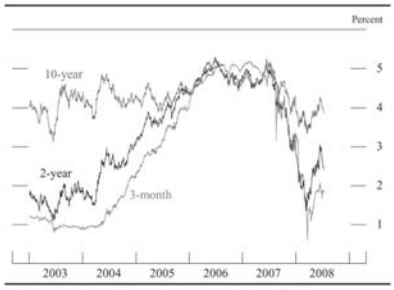
Policy Expectations and Interest Rates

The current target for the federal funds rate, at 2 percent, is substantially below the level that investors expected as of late December 2007. According to futures quotes at that time, market participants expected that the federal funds rate would be around 3½ percent by July. Looking forward, however, investors now expect that the next policy move will be up, and a small degree of tightening has been priced in by the end of 2008. Measures of uncertainty about the path of policy rose with the onset of financial turbulence last year and are currently near the high end of their range over the past 10 years.

Treasury yields fell sharply from the end of 2007 through March amid concerns about the health of financial firms, severe strains in financial markets, a weakening economic outlook, and lower expectations for future policy rates. Since late March, yields have risen across the curve as fears of a deep economic contraction have receded and concerns about the inflation outlook have increased. On net, 2-year yields are down 65 basis points, and 10-year yields are down 20 basis points since the start of the year.

Yields on Treasury inflation-protected securities largely moved in line with nominal yields—that is, they fell through mid-March and then rose—but the rise since March has been somewhat less than that of nominal yields. In addition, shifting liquidity conditions in

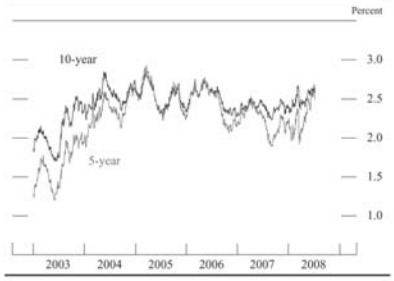
Interest rates on selected Treasury securities, 2003–08



NOTE: The data are daily and extend through July 9, 2008.
SOURCE: Department of the Treasury.

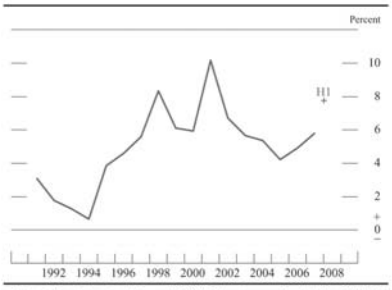
the markets for nominal and indexed Treasury securities at times affected the spreads between nominal and indexed yields, also known as inflation compensation. On net, 10-year inflation compensation has risen about 20 basis points since the end of 2007, suggesting some increase in investors' concerns about the inflation outlook. Inflation compensation rose over both the near term and the longer term, but the increase was larger over the near term, as compensation over the next 5 years rose about 30 basis points whereas compensation over the period from 5 years ahead to 10 years ahead rose only 10 basis points. In part because of a lag in the indexation of inflation-protected securities, near-term inflation compensation can be strongly affected by

TIPS-based inflation compensation, 2003–08



NOTE: The data are daily and extend through July 9, 2008. Based on a comparison of the yield curve for Treasury inflation-protected securities (TIPS) with the nominal off-the-run Treasury yield curve.
SOURCE: Federal Reserve Board calculations based on data provided by the Federal Reserve Bank of New York and Barclays.

M2 growth rate, 1991–2008



NOTE: The data extend through 2008:Q1 and are estimated for 2008:Q2. Through 2007, the data are annual on a fourth-quarter over fourth-quarter basis; the final observation refers to 2008:Q2 relative to 2007:Q4 at an annual rate. M2 consists of currency, traveler's checks, demand deposits, other checkable deposits, savings deposits (including money market deposit accounts), small-denomination time deposits, and balances in retail money market funds.

SOURCE: Federal Reserve Board, Statistical Release H.6, "Money Stock Measures."

the latest movements in energy and food prices; these prices have risen sharply in recent months.

Money and Reserves

M2 is estimated to have expanded at an annual rate of 7¾ percent over the first half of 2008, notably faster than the likely growth rate of nominal GDP. Demand for money balances was supported by declines in the opportunity cost of holding money relative to other financial assets and by strong demand for safe and liquid assets amid volatility and strains in financial markets. Money market mutual fund shares grew particularly rapidly in the first quarter. However, growth of money market mutual funds dropped considerably in the second quarter, and small time deposits contracted; M2 slowed accordingly. Demand for currency continued to be lackluster for the most of the first half-year, but it picked up noticeably late in the second quarter as domestic demand grew and foreign demand was estimated to be less weak.

The strains in bank funding markets over recent months have posed challenges for the implementation of monetary policy. Banks generally have seemed more cautious in their activity in the federal funds market and less willing to take advantage of potential arbitrage opportunities in that market over the course of a day and across the days of a reserve maintenance period. In this environment, the Open Market Desk's decisions regarding the appropriate quantity of reserves to be supplied each day through open market operations have been complicated, and volatility in the federal funds rate has been elevated. The authority to pay interest on reserves could be helpful to the Federal Reserve in limiting the volatility in the federal funds rate. The ability to pay interest on reserves would also allow the Federal Reserve to manage its balance sheet more efficiently in circumstances in which promoting financial stability required the provision of substantial amounts of discount window credit to the financial sector. In light of these considerations, the Federal Reserve has asked the Congress to accelerate the effective date of statutory authority to pay interest on reserve balances, which is currently October 2011.

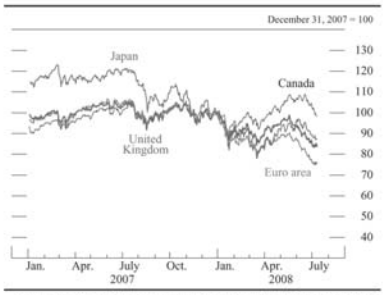
International Developments

International Financial Markets

Global financial markets remained distressed over the first half of 2008, primarily because of concerns about weakness in real estate and slowing global economic growth. Amid heightened market turbulence in March, the European Central Bank (ECB), Bank of England, Bank of Canada, and Swiss National Bank (SNB) announced a further set of joint actions with the Federal Reserve to help improve the functioning of short-term funding markets. The Federal Open Market Committee increased its temporary swap line to the ECB in March from $20 billion to $30 billion and its line to the SNB from $4 billion to $6 billion. In May, these amounts were increased further to $50 billion and $12 billion, respectively, and the lines were extended through January 2009. Meanwhile, the Bank of England and the Bank of Canada each introduced new term funding arrangements in their domestic currencies, and the Bank of England also established a facility to swap government bonds for banks' mortgage-backed securities for a term of one to three years. The ECB has also continued to offer longer-term funding in euros, auctioning three-month funds totaling €270 billion in the first quarter and €250 billion in the second quarter and adding a new long-term refinancing operation with a six-month maturity.

Market volatility has persisted in recent months, with ongoing concerns about the balance sheets of financial institutions. Since the middle of last year, European banks have announced about $200 billion in write-downs—largely as a result of indirect exposure to U.S. credit markets through both sponsorship of and investments in structured credit products—and further

Equity indexes in selected advanced foreign economies, 2007–08

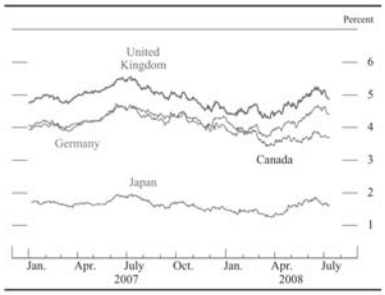


NOTE: The data are daily. The last observation for each series is July 9, 2008. Because the Tokyo Exchange was closed on December 31, 2007, the Japan index is scaled so that the December 28, 2007, closing value equals 100.

SOURCE: For euro area, Dow Jones Euro STOXX Index; for Canada, Toronto Stock Exchange 300 Composite Index; for Japan, Tokyo Stock Exchange (TOPIX); and for the United Kingdom, London Stock Exchange (FTSE 350), as reported by Bloomberg.

losses may be recognized in second-quarter financial statements. In addition, mortgage lenders in the United Kingdom have been affected by weakness in property prices there and by reduced access to capital market funding. In general, the institutions that have recognized significant losses have taken prompt steps to replenish capital from a variety of sources; more than $140 billion had been raised by the end of June.

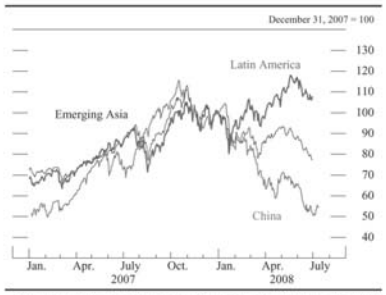
Yields on benchmark government bonds in selected advanced foreign economies, 2007–08



NOTE: The data, which are for 10-year bonds, are daily. The last observation for each series is July 9, 2008.

SOURCE: Bloomberg.

Equity indexes in selected emerging market economies, 2007–08



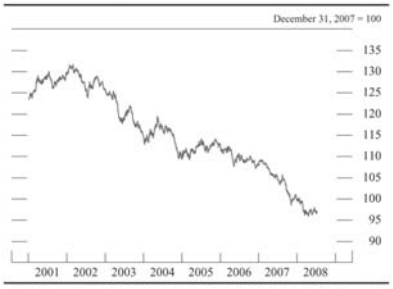
NOTE: The data are daily. The last observation for each series is July 9, 2008. Because the Shanghai Stock Exchange was closed on December 31, 2007, the China index is scaled so that the December 28, 2007, closing value equals 100. The Latin American economies are Argentina, Brazil, Chile, Colombia, Mexico, and Peru. The emerging Asian economies are China, India, Indonesia, Malaysia, Pakistan, the Philippines, South Korea, Taiwan, and Thailand.

SOURCE: For Latin America and emerging Asia, Morgan Stanley Capital International (MSCI) index; for China, Shanghai Composite Index, as reported by Bloomberg.

On net, most major equity indexes in the advanced foreign economies stand 12 percent to 25 percent lower in local currency terms compared with the end of 2007. European stock indexes were led lower by the stock prices of financial firms, which declined 34 percent (measured in euros); Japanese financial stocks are down 9 percent on the year. The financial turbulence has had less impact on Latin American stock prices. Equity indexes in Mexico and Brazil were virtually unchanged, on balance, over the first half of 2008. However, Chinese stock prices have tumbled 44 percent since the end of 2007, virtually erasing last year's gains, and other major emerging Asian equity indexes are also down, but to a lesser extent.

Liquidity in European government bond markets was impaired in March but seems to have improved in recent months. Long-term bond yields in the advanced foreign economies fell in the first quarter but have more than reversed these declines as investors no longer expect the ECB and the Bank of England to ease their policy rates. Since the end of 2007, long-term rates have risen, on net, 11 basis points in Germany, 38 basis points in the United Kingdom, and 12 basis points in Japan, and nominal yield curves have flattened. Meanwhile, implied long-term inflation compensation has increased 10 basis points in Japan and nearly 30 basis points in Germany and Canada.

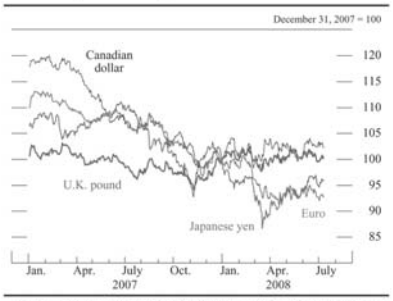
U.S. dollar nominal exchange rate, broad index, 2001–08



NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for the series is July 9, 2008. The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of the most important U.S. trading partners. The index weights, which change over time, are derived from U.S. export shares and from U.S. and foreign import shares.
SOURCE: Federal Reserve Board.

The Federal Reserve's broadest measure of the nominal trade-weighted foreign exchange value of the dollar has declined about 3 percent, on net, since the end of last year. Over the same period, the major currencies index of the dollar has also declined about 3 percent. The dollar depreciated sharply against the euro and the yen in February and March but has recovered some in recent months. On net thus far this year, the dollar is down about 4 percent against the yen and 7 percent against the euro. The dollar is 2 percent higher against the Canadian dollar and slightly higher against sterling.

U.S. dollar exchange rate against selected major currencies, 2007–08



NOTE: The data, which are in foreign currency units per dollar, are daily. The last observation for each series is July 9, 2008.
SOURCE: Bloomberg.

Change in consumer prices for major foreign economies, 2004–08

NOTE: The data are monthly, and change is from one year earlier. The data extend through May 2008.
SOURCE: Haver.

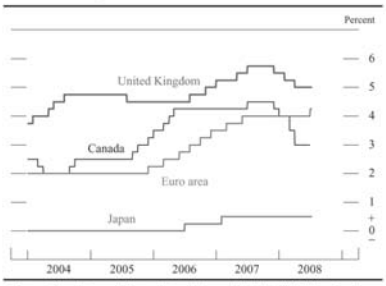
The dollar has declined 6 percent against the Chinese renminbi since the end of 2007.

Advanced Foreign Economies

Economic growth in the major advanced foreign economies appears to have slowed somewhat this year. Although both the euro area and Japan posted strong first-quarter GDP growth rates, recent monthly indicators have been more subdued. In other countries, growth rates declined in the first quarter, and first-quarter real GDP even contracted slightly in Canada, where trade and financial ties to the United States are strong. Surveys of banks in Europe show a further tightening of credit standards in the first half of 2008 for both households and businesses. Lending to businesses appears to have remained solid, but household borrowing has slowed. Housing markets in a number of countries—including Ireland, Spain, and the United Kingdom—have continued to soften.

Since the beginning of the year, headline rates of inflation have continued to move up, on balance, in most economies, mainly because of increasing prices for food and energy. The 12-month change in consumer prices in both the euro area and the United Kingdom increased further from January to mid-2008, while core inflation rates (which exclude the changes in the prices of energy and unprocessed food) have increased much less. In Canada, where food price increases have been muted, inflation is little changed, on balance, since the beginning of the year but has risen in the past couple of months. Japanese consumer prices are roughly

Official or targeted interest rates in selected advanced foreign economies, 2004–08



NOTE: The data are daily and extend through July 9, 2008. The data shown are, for Canada, the overnight rate; for the euro area, the minimum bid rate on main refinancing operations; for Japan, the call money rate; and, for the United Kingdom, the official bank rate paid on commercial reserves.
SOURCE: The central bank of each area or country shown.

unchanged on a 12-month basis when both food and energy prices are excluded.

Over the first half of this year, the focus of the major foreign central banks appears to have shifted somewhat from the impact of financial market strains on growth to the effect of higher commodity prices on inflation. After initially lowering official interest rates, the Bank of Canada and the Bank of England have held their target rates steady since April, and the Bank of Japan has kept its policy rate unchanged at 0.5 percent all year. Recent inflation rates and statements from all of these central banks have led market participants to expect policy rates to increase slightly or to remain on hold. On July 3, the ECB raised its policy rate 25 basis points, to 4.25 percent, but it hinted that further rate hikes were not in the offing.

Emerging Market Economies

Recent data suggest that real GDP growth in China remained strong in the first half of this year. Although export growth slowed, domestic demand appears to have accelerated.

Elsewhere in emerging Asia, recent performance has varied but, on balance, indicators suggest that activity has remained solid in the region. In the first quarter, real GDP growth moderated in Korea, Malaysia, and Thailand but was strong in Hong Kong and Singapore. Exports of the region have generally slowed along with the deceleration in global economic activity; however, domestic demand strengthened in a number of countries.

Economic activity has decelerated in Latin America. In Mexico, output growth slowed to about 2 percent in the first quarter, in line with the step-down in the pace of activity in the United States that began toward the end of last year. In other Latin American countries, notably Brazil and Venezuela, growth also moderated.

Higher prices for food and energy have continued to exert upward pressures on inflation across emerging market economies. In China, headline inflation has risen, reaching roughly 8 percent in recent months. In response to the inflationary pressures, the Chinese authorities have allowed the renminbi to appreciate at a more rapid pace, and the People's Bank of China has further tightened monetary policy. The Bank has raised the required reserve ratio five times this year by a total of 300 basis points, to 17½ percent. Elsewhere in emerging market economies, 12-month headline inflation in a number of countries continued to rise in recent months, thereby prompting many central banks to tighten monetary policy. In some cases, governments also instituted export restrictions or reduced import duties for some food products. The rising cost of energy subsidies has led governments in China, India, Malaysia, Indonesia, and Taiwan to raise administered gasoline prices roughly 10 percent to 40 percent in recent months.

Part 3
Monetary Policy over the First Half of 2008

After easing the stance of monetary policy 100 basis points over the second half of 2007, the Federal Open Market Committee (FOMC) lowered the target federal funds rate 225 basis points further in the first half of 2008.[11] The Federal Reserve also took a number of additional actions to increase liquidity and to improve the functioning of financial markets.

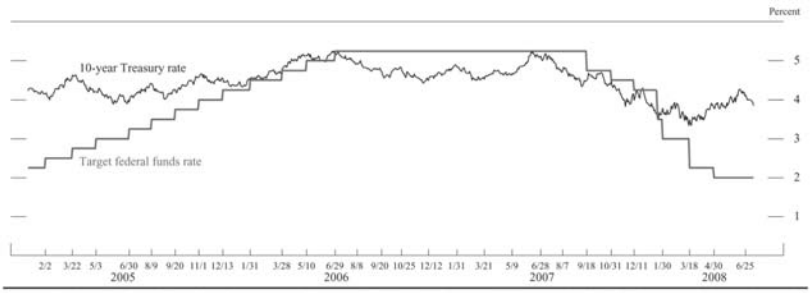
In a conference call on January 9, the Committee reviewed recent economic data and financial market developments. The information, which included weaker-than-expected data on home sales and employment for December as well as a sharp decline in equity prices since the beginning of the year, suggested that the downside risks to growth had increased significantly since the time of the December FOMC meeting. Participants cited concerns that the slowing of economic growth could lead to a further tightening of financial conditions, which in turn could reinforce the economic slowdown. However, core inflation had edged up in recent months, and considerable uncertainty surrounded the inflation outlook. On balance, participants were generally of the view that substantial additional policy easing might well be necessary to support economic activity and reduce the downside risks to growth, and they discussed the possible timing of such actions.

On January 21, the Committee held another conference call. Strains in some financial markets had intensified, and incoming evidence had reinforced the view that the outlook for economic activity was weak. Participants observed that investors apparently were becoming increasingly concerned about the economic outlook and downside risks to activity and that these developments could lead to an excessive pullback in credit availability. In light of these developments, all members judged that a substantial easing in policy was appropriate to foster moderate economic growth and reduce the downside risks to economic activity. The Committee decided to lower the target for the federal funds rate 75 basis points, to 3½ percent, and judged that appreciable downside risks to growth remained. Although inflation was expected to edge lower over the course of 2008, participants underscored their view that this assessment was conditioned upon inflation expectations remaining well anchored and stressed that the inflation situation should continue to be monitored carefully.

The data reviewed at the regularly scheduled FOMC meeting on January 29 and 30 confirmed a sharp decel-

11. *Members* of the FOMC in 2008 consist of members of the Board of Governors of the Federal Reserve System plus the presidents of the Federal Reserve Banks of Cleveland, Dallas, Minneapolis, New York, and Philadelphia. *Participants* at FOMC meetings consist of members of the Board of Governors and all Reserve Bank presidents.

Selected interest rates, 2005–08



NOTE: The data are daily and extend through July 9, 2008. The 10-year Treasury rate is the constant-maturity yield based on the most actively traded securities. The dates on the horizontal axis are those of regularly scheduled Federal Open Market Committee meetings.
SOURCE: Department of the Treasury and the Federal Reserve.

eration in economic growth during the fourth quarter of 2007 and a continued tightening of financial conditions. With the contraction in the housing sector intensifying and a range of financial markets remaining under pressure, economic growth was expected to stay soft in the first half of 2008 before picking up strength in the second half. However, the ongoing weaknesses in home sales and house prices, as well as the tightening of credit conditions for households and businesses, were seen as posing downside risks to the near-term outlook for economic growth. Moreover, the potential for adverse feedback between the financial markets and the economy was a significant risk. Participants expressed some concern about the disappointing inflation data received over the latter part of 2007. Although many expected that a leveling-out of prices for energy and other commodities, such as that embedded in futures markets, and a period of below-trend growth would contribute to some moderation in inflation pressures over time, the Committee believed that it remained necessary to monitor inflation developments carefully. Against that backdrop, the FOMC decided to lower the target for the federal funds rate 50 basis points, to 3 percent. The Committee believed that this policy action, combined with those taken earlier, would help promote moderate growth over time and mitigate the risks to economic activity. However, members judged that downside risks to growth remained.

In a conference call on March 10, the Committee reviewed financial market developments and considered proposals aimed at supporting the liquidity and orderly functioning of those markets. In light of the sharp deterioration of some key money and credit markets, the Committee approved the establishment of the Term Securities Lending Facility, under which primary dealers would be able to borrow Treasury securities from the System Open Market Account for a term of approximately one month against any collateral eligible for open market operations and the highest-quality private residential mortgage-backed securities (MBS).[12] The new facility was designed to alleviate pressures in the financing markets for securities. In addition, the Committee agreed to expand the existing reciprocal currency agreements with the European Central Bank and the Swiss National Bank to $30 billion and $6 billion, respectively, and to extend the terms of these agreements through September 2008. Over the next few days, financial market strains intensified further. On March 16, the Federal Reserve announced emergency measures to bolster liquidity and promote orderly functioning in financial markets, including the approval of the financing arrangement associated with the acquisition of The Bear Stearns Companies, Inc., by JPMorgan Chase & Co. and the establishment of the Primary Dealer Credit Facility to improve the ability of primary dealers to provide financing to participants in securitization markets. In addition, the primary credit rate was lowered 25 basis points, and the maximum term of primary credit loans was extended to 90 days.

When the Committee met on March 18, financial markets continued to be under great stress, particularly the markets for short-term collateralized and uncollateralized funding. Spreads on interbank loans and lower-rated commercial paper had widened over the intermeeting period, and obtaining credit through repurchase agreements backed by agency and private-label MBS had become more difficult amid reports of increased margin, or "haircuts," being required by lenders. Yields on Treasury bills and repurchase agreements backed by Treasury securities had plummeted, reflecting investors' heightened demand for the safest assets.

Participants at the March 18 FOMC meeting noted that prospects for both economic activity and near-term inflation had deteriorated since January, and many thought that some contraction in economic activity in the first half of 2008 was likely. Although the economy was expected to recover in the second half and to grow further in 2009, considerable uncertainty surrounded this forecast. Some participants expressed concern that falling house prices and financial market stress might lead to a more severe and protracted downturn than anticipated. Recent readings on inflation had been elevated, and some indicators of inflation expectations had risen. However, a flattening-out of prices for oil and other commodities—as implied by futures prices—and the projected easing of pressures on resources were expected to contribute to some moderation in inflation. All in all, most members judged that a 75 basis point reduction in the target federal funds rate, to 2¼ percent, was appropriate to address the combination of risks of slowing economic growth, inflationary pressures, and financial market disruptions. In its statement, the Committee highlighted the further weakening in the outlook for economic activity, but it also emphasized the importance of monitoring inflation developments carefully.

The data reviewed at the meeting on April 29 and 30 indicated that economic growth had been weak in the first three months of 2008 and that core consumer price inflation had slowed, but that overall inflation had remained elevated. FOMC participants indicated that these developments had been broadly consistent with their expectations. Conditions across a number of financial markets were judged to have improved since the

12. By notation vote completed on March 20, AAA-rated commercial MBS were added to the list of acceptable collateral.

March meeting, but financial markets remained under considerable stress. Although the likelihood that economic activity would be severely disrupted by a sharp deterioration in financial markets had apparently receded, most participants thought that the risks to economic growth were still skewed to the downside. All participants expressed concern about upside risks to inflation posed by rising commodity prices and the depreciation of the dollar, but some participants noted that the downside risks to economic activity also implied that there were downside risks to price pressures as well. Participants expressed significant uncertainty concerning the appropriate stance of monetary policy in these circumstances. Some participants noted that the level of the federal funds target, especially when compared with the current rate of inflation, was relatively low by historical standards. Others noted that financial market strains and elevated risk spreads had offset much of the effects of policy easing on the cost of credit to borrowers. On balance, most members agreed that the target for the federal funds rate should be lowered 25 basis points, to 2 percent. The Committee expected that the policy easing would help to foster moderate growth over time without impeding a moderation in inflation. The Committee agreed that, in light of the substantial policy easing to date and the ongoing measures to foster financial market liquidity, the risks to growth were now more closely balanced by the risks to inflation.

In view of persisting strains in funding markets, the FOMC also approved proposals to expand the liquidity arrangements that had been put in place in previous months. The reciprocal currency agreements with the European Central Bank and Swiss National Bank were increased to $50 billion and $12 billion, respectively, and both were extended through January 2009. The collateral accepted by the Term Securities Lending Facility was expanded to include all AAA-rated asset-backed securities. In addition, Chairman Bernanke announced his intention to expand the Term Auction Facility to $150 billion under authority previously delegated by the Board of Governors.

At the time of the meeting held June 24 and 25, the available indicators suggested that economic activity in the first half of the year had not been as weak as had been expected in April. Nevertheless, several factors were viewed as likely to restrain activity in the near term, including the contraction in the housing sector, sharply higher energy prices, and continued tight credit conditions. Although financial market conditions generally appeared to have improved modestly since the April meeting, participants noted that the potential for adverse financial market developments still posed significant downside risks to economic activity. The further large increase in energy prices also prompted an upward revision of projections for overall inflation in the second half of 2008. Most participants expected that a leveling-out of energy prices and continued slack in resource utilization would lead inflation to moderate in 2009 and 2010, but the persistent tendency in recent years for commodity prices to exceed the trajectory implied by futures market prices engendered considerable uncertainty around the projected moderation of inflation. Members generally agreed that the downside risks to growth had eased somewhat since the previous FOMC meeting while the upside risks to inflation had intensified. Against this backdrop, most members judged that maintaining the current stance of policy at this meeting represented an appropriate balancing of the risks to the economic outlook. Nonetheless, policymakers recognized that circumstances could change quickly and noted that they might need to respond promptly to incoming information about the evolution of risks.

Part 4
Summary of Economic Projections

The following material appears as an addendum to the minutes of the June 24–25, 2008, meeting of the Federal Open Market Committee.

In conjunction with the June 2008 FOMC meeting, the members of the Board of Governors and the presidents of the Federal Reserve Banks, all of whom participate in deliberations of the FOMC, provided projections for economic growth, unemployment, and inflation in 2008, 2009, and 2010. Projections were based on information available through the conclusion of the June meeting, on each participant's assumptions regarding a range of factors likely to affect economic outcomes, and on his or her assessment of appropriate monetary policy. "Appropriate monetary policy" is defined as the future policy that, based on current information, is deemed most likely to foster outcomes for economic activity and inflation that best satisfy the participant's interpretation of the Federal Reserve's dual objectives of maximum employment and price stability.

FOMC participants generally expected that, over the remainder of this year, output would expand at a pace appreciably below its trend rate, owing primarily to continued weakness in housing markets, the substantial rise in energy prices in recent months, and the reduction in the availability of household and business credit resulting from continued strains in financial markets. As indicated in table 1 and figure 1, output growth further ahead was projected to pick up sufficiently to begin to reverse some of the increase in the unemployment rate by 2010. In light of the recent surge in the prices of oil and agricultural commodities, total inflation was expected to rise further in coming months and to be elevated for 2008 as a whole. However, many participants expected that persistent economic slack and a flattening out of energy and other commodity prices in line with futures market prices would cause overall inflation to decline noticeably in 2009 and 2010. Most participants judged that greater-than-normal uncertainty surrounded their projections for both output growth and inflation. A significant majority of participants viewed the risks to their forecasts for output growth as weighted to the downside, and a similar number saw the risks to the inflation outlook as skewed to the upside.

Table 1. Economic projections of Federal Reserve Governors and Reserve Bank presidents, June 2008

Percent

Variable	2008	2009	2010
	Central tendency[1]		
Change in real GDP	1.0 to 1.6	2.0 to 2.8	2.5 to 3.0
April projection	0.3 to 1.2	2.0 to 2.8	2.6 to 3.1
Unemployment rate	5.5 to 5.7	5.3 to 5.8	5.0 to 5.6
April projection	5.5 to 5.7	5.2 to 5.7	4.9 to 5.5
PCE inflation	3.8 to 4.2	2.0 to 2.3	1.8 to 2.0
April projection	3.1 to 3.4	1.9 to 2.3	1.8 to 2.0
Core PCE inflation	2.2 to 2.4	2.0 to 2.2	1.8 to 2.0
April projection	2.2 to 2.4	1.9 to 2.1	1.7 to 1.9
	Range[2]		
Change in real GDP	0.9 to 1.8	1.9 to 3.0	2.0 to 3.5
April projection	0.0 to 1.5	1.8 to 3.0	2.0 to 3.4
Unemployment rate	5.5 to 5.8	5.2 to 6.1	5.0 to 5.8
April projection	5.3 to 6.0	5.2 to 6.3	4.8 to 5.9
PCE inflation	3.4 to 4.6	1.7 to 3.0	1.6 to 2.1
April projection	2.8 to 3.8	1.7 to 3.0	1.5 to 2.0
Core PCE inflation	2.0 to 2.5	1.8 to 2.3	1.5 to 2.0
April projection	1.9 to 2.5	1.7 to 2.2	1.3 to 2.0

NOTE: Projections of change in real gross domestic product (GDP) and of inflation are from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy.

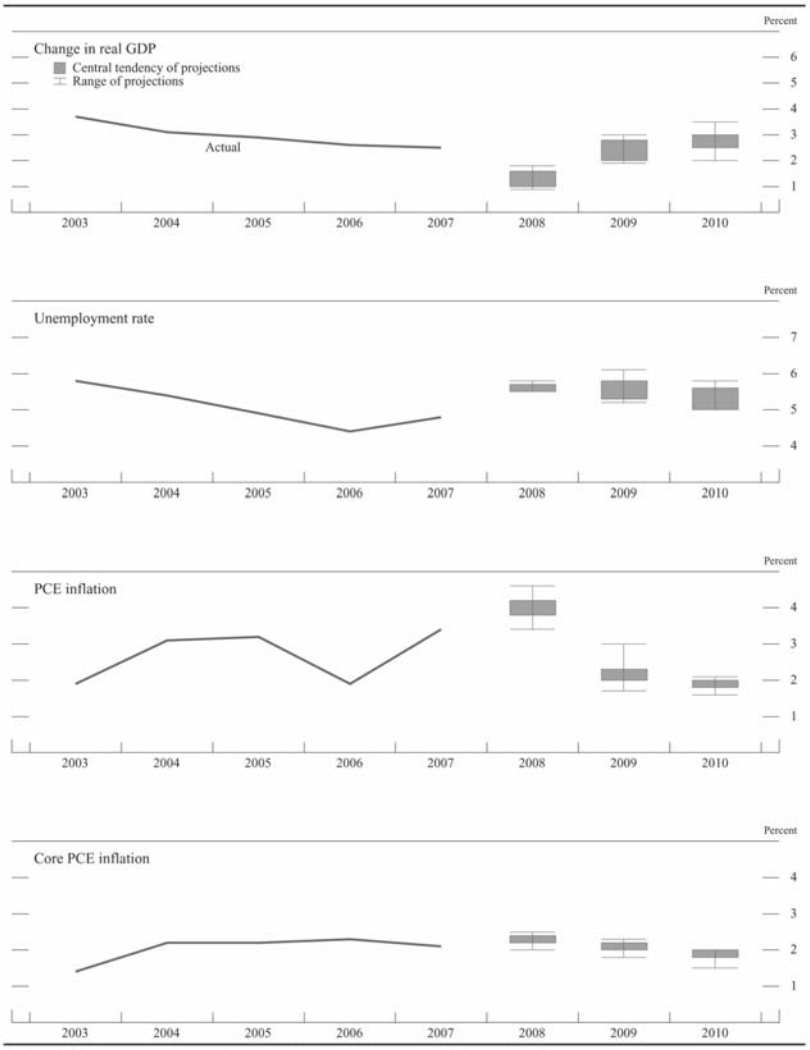
1. The central tendency excludes the three highest and three lowest projections for each variable in each year.

2. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.

The Outlook

The central tendency of participants' projections for real GDP growth in 2008, at 1.0 percent to 1.6 percent, was noticeably higher than the central tendency of the projections provided in conjunction with the April FOMC meeting, which was 0.3 percent to 1.2 percent. The upward revision to the 2008 outlook stemmed primarily from better-than-expected data on consumer and business spending received between the April and June FOMC meetings. Nonetheless, several participants noted that the recent firmness in consumer spending could well prove transitory and that the ongoing housing market correction, tight credit conditions, and elevated energy prices would damp domestic demand in the second half of this year. Still, the substantial eas-

Figure 1. Central tendencies and ranges of economic projections, 2008–10



NOTE: Definitions of variables are in the notes to table 1. The data for the actual values of the variables are annual.

ing of monetary policy since last year and the continued strength in exports should help to support economic growth; in addition, strains had eased somewhat in some financial markets since April. Real GDP growth was expected to increase in 2009 as the adjustment in the housing sector ran its course, financial markets gradually resumed more-normal functioning, and the downward pressure on real incomes stemming from increases in energy and food prices in the first half of 2008 began to fade. In 2010, economic activity was projected to expand at or a little above participants' estimates of the rate of trend growth.

With output growth continuing to run below trend in the second half of 2008, most participants expected that the unemployment rate would move up somewhat over the remainder of this year. The central tendency of participants' projections for the average rate of unemployment in the fourth quarter of 2008 was 5.5 percent to 5.7 percent, unchanged from the central tendency of projections that were provided in conjunction with the April FOMC meeting and consistent with some slack in resource utilization. The central tendency of participants' projections was for the unemployment rate to stabilize in 2009 and to edge down in 2010 as output and employment growth pick up.

The surge in the prices of oil and agricultural commodities since April led participants to revise up noticeably their projections for total inflation in the near term. However, the central tendency of participants' projections for core PCE inflation in 2008 was 2.2 percent to 2.4 percent, unchanged from the central tendency in April, as lower-than-expected rates of core inflation over recent months offset the expectations of some pass-through of the recent surge in energy prices into core inflation over the next few months. Rates of both overall and core inflation were expected to decline over the next two years, reflecting a flattening out of the prices of oil and other commodities consistent with futures market prices, slack in resource utilization, and longer-term inflation expectations that were expected to remain generally well anchored.

The contour of participants' projections for output growth, unemployment, and inflation was importantly shaped by their judgments about the measured rates of inflation consistent with the Federal Reserve's dual mandate to promote maximum employment and price stability and about the time horizon over which policy should aim to attain those rates given current economic conditions. Most participants judged that it might take a substantial period of time for output and inflation to recover from the recent shocks, which had elevated inflation and damped economic activity. A number of participants projected that the rate of unemployment might remain slightly above its longer-run sustainable level even in 2010; total inflation in 2010 was also judged likely to continue to run a bit above levels that most participants saw as consistent with the price stability objective of the Federal Reserve's dual mandate. Most participants saw further declines in both unemployment and inflation as likely in the period beyond the forecast horizon. (See table 1 on page 39 and figure 1 on page 40).

Risks to the Outlook

Most participants viewed the risks to their projections for GDP growth as weighted to the downside and the associated risks to their projections for the unemployment rate as tilted to the upside. The possibility that house prices could decline more steeply than anticipated, further reducing households' wealth, restricting their access to credit, and eroding the capital of lending institutions, continued to be perceived as a significant downside risk to the outlook for economic growth. Although financial markets had shown some further improvement since April, conditions in those markets remained strained; a number of participants also pointed to the risk that further improvement could be quite slow and subject to relapse. The potential for current tight credit conditions to exert an unexpectedly large restraint on household and business spending was also viewed as a significant downside risk to economic activity. An adverse feedback loop, in which weaker economic activity led to a further worsening of financial conditions, which in turn could damp economic growth even further, continued to be viewed as a worrisome possibility, though less so than in April. Indeed, some participants pointed to the apparent resilience of the U.S. economy in the face of recent financial distress and suggested that the adverse effects of financial developments on economic activity outside of the housing sector could prove to be more modest than anticipated.

Most participants viewed the risks to their inflation projections as weighted to the upside. Recent sharp increases in energy and food prices and the pass-through of dollar depreciation into import prices could boost inflation in the near term by more than currently anticipated. Although participants generally assumed that commodity prices will flatten out, roughly in line with the trajectory implied by futures prices, the fact that futures markets had persistently underpredicted commodity prices in recent experience was viewed as an upside risk to the outlook for inflation. Participants also saw a risk that inflation expectations could become less firmly anchored, particularly if the current elevated

rates of headline inflation did not moderate as quickly as they expected.

Participants continued to view uncertainty about the outlook for economic activity as higher than normal, with a number pointing to uncertainty about the duration and effects of the ongoing financial strains on real activity. In addition, participants expressed noticeably more uncertainty about their inflation projections than they had in January and April, a shift in perception that they attributed importantly to increased uncertainty about the future course of energy and food prices and to greater uncertainty about the extent of pass-through of changes in those prices into core inflation. (Table 2 provides estimates of forecast uncertainty for real GDP growth, unemployment, and inflation since 1987.[13])

Table 2. Average historical projection error ranges

Percentage points

Variable	2008	2009	2010
Change in real GDP[1]	±0.9	±1.3	±1.4
Unemployment rate[1]	±0.3	±0.7	±1.0
Total consumer prices[2]	±0.6	±1.0	±1.0

NOTE: Error ranges shown are measured as plus or minus the root mean squared error of projections that were released in the summer from 1987 through 2007 for the current and following two years by various private and government forecasters. As described in the box "Forecast Uncertainty," under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, and consumer prices will be in ranges implied by the average size of projection errors made in the past. Further information is in David Reifschneider and Peter Tulip (2007), "Gauging the Uncertainty of the Economic Outlook from Historical Forecasting Errors," Finance and Economics Discussion Series 2007-60 (Board of Governors of the Federal Reserve System, November).

1. For definitions, refer to general note in table 1.

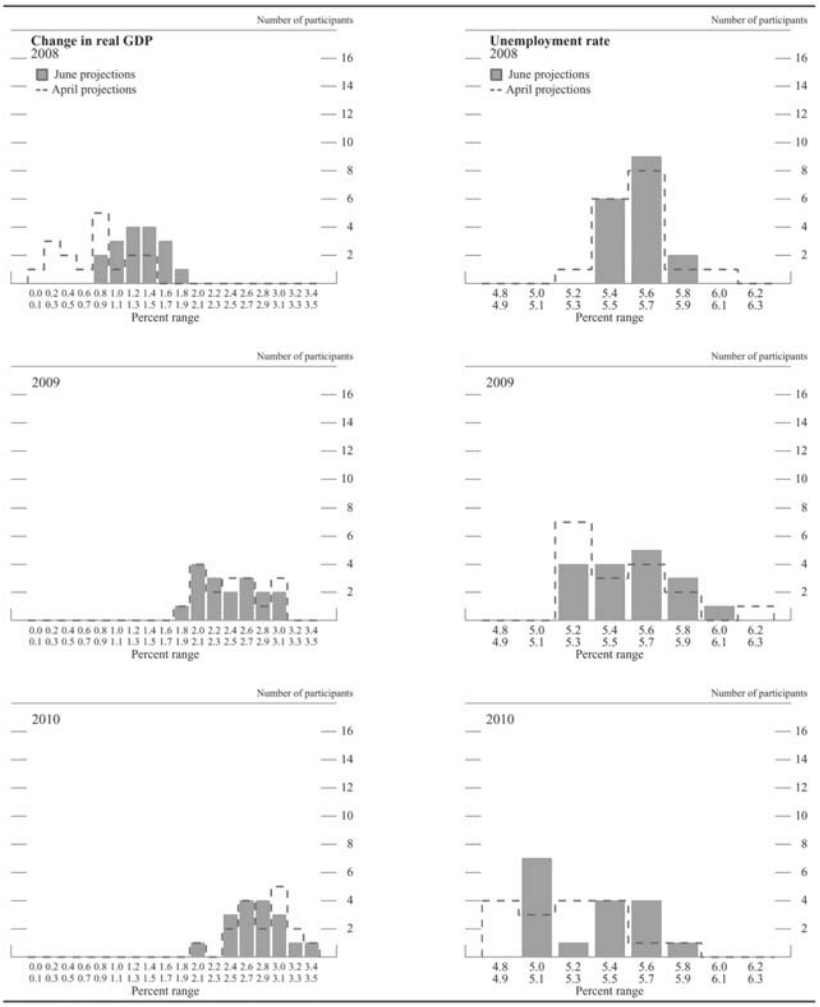
2. Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projection is percent change, fourth quarter of the previous year to the fourth quarter of the year indicated.

Diversity of Participants' Views

Figures 2.A and 2.B provide more detail on the diversity of participants' views regarding likely economic outcomes over the projection period. The dispersion of participants' projections for real GDP growth in 2008 was noticeably narrower than in the forecasts provided in April, reflecting primarily the accumulation of data about the actual performance of the economy in the first half of the year; their views about output growth in coming quarters and in 2009 continued to exhibit appreciable dispersion. The dispersion of participants' projections for real activity next year seemed largely to reflect differing assessments of the effects of adverse financial market conditions on economic growth, the speed with which credit conditions might improve, and the depth and duration of the correction in the housing market. Indeed, views differed notably on the pace at which output and employment would recover in 2009, with some participants expressing a concern that growth might be constrained by the persistence of financial strains over a considerable period. The dispersion of participants' longer-term projections was also affected to some degree by differences in their judgments about the economy's trend growth rate and the unemployment rate that would be consistent over time with maximum employment. The dispersion of the projections for PCE inflation in the near term reflected in large part differing views on the extent to which recent increases in energy and food prices would pass through into higher consumer prices. In addition, participants held differing views on the degree to which inflation expectations were anchored and the role that expectations might play in the inflation process over the short and medium term. Participants' inflation projections further ahead were shaped by the views of the rate of inflation consistent with the Federal Reserve's dual objectives and the time it would take to achieve these goals given current economic conditions and appropriate policy.

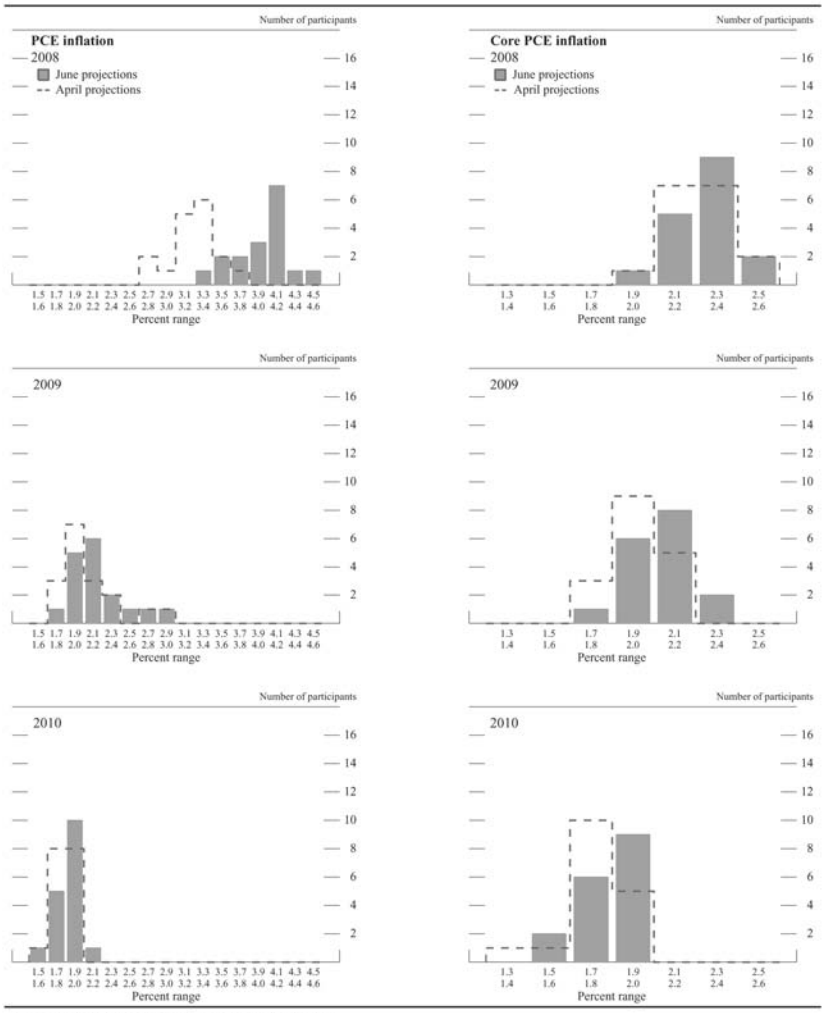
13. The box "Forecast Uncertainty" at the end of this summary discusses the sources and interpretation of uncertainty in economic forecasts and explains the approach used to assess the uncertainty and risks attending participants' projections.

Figure 2.A. Distribution of participants' projections for the change in real GDP and for the unemployment rate, 2008–10



NOTE: Definitions of variables are in the general note to table 1.

Figure 2.B. Distribution of participants' projections for PCE inflation and for core PCE inflation, 2008–10



NOTE: Definitions of variables are in the general note to table 1.

Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world. And the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 (see page 42) summarizes the average historical accuracy of a range of forecasts, including those reported in past Monetary Policy Reports and those prepared by Federal Reserve Board staff in advance of meetings of the Federal Open Market Committee. The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand 2.1 percent to 3.9 percent in the current year, 1.7 percent to 4.3 percent in the second year, and 1.6 percent to 4.4 percent in the third year. The corresponding 70 percent confidence intervals for overall inflation would be 1.4 percent to 2.6 percent in the current year and 1.0 percent to 3.0 percent in the second and third years.

Because current conditions may differ from those that prevailed on average over history, participants provide judgments as to whether the uncertainty attached to their projections of each variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty in the past as shown in table 2. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, downside, or are broadly balanced. That is, participants judge whether each variable is more likely to be above or below their projections of the most likely outcome. These judgments about the uncertainty and the risks attending each participant's projections are distinct from the diversity of participants' views about the most likely outcomes. Forecast uncertainty is concerned with the risks associated with a particular projection, rather than with divergences across a number of different projections.